PHILADELPHIA, JULY 2, 1881.

ORIGINAL COMMUNICATIONS.

REMARKABLE CHANGE OF COLOR OF THE HAIR FROM LIGHT BLONDE TO NEARLY JET-BLACK IN A PATIENT WHILE UNDER TREATMENT BY PILOCARPIN—REPORT OF A CASE OF PYELO-NEPHRITIS, WITH UNUSUALLY PROLONGED ANURIA.

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MISS C., aged 25 years; a blonde, with light-blue eyes; petite figure; weight, about 100 pounds; previous health, good; occupation, school-teacher.

October, 1879.—Missed menstrual periods from this date to January, 1880, when she menstruated, and again missed until August, 1880. From October, 1879, to January, 1880, she suffered from obstinate constipation, but continued her labors at school.

Came under my care in January, 1880, for the constipation. This was very obstinate, the usual succession of purgatives failing to produce any result for a week or ten days, when the bowels would move, and immediately there would set in a profuse diarrhœa, thirty or forty watery stools in two or three days, continuing until checked by opium. For three months these alternating attacks of constipation and diarrhœa recurred, in spite of all endeavors to regulate the bowels. On several occasions there occurred large evacuations of pure jelly, from a pint to a quart at a time,—passages such as are described as sometimes being seen in membranous enteritis. This condition was finally relieved by general galvanization, applied three times a week, from thirty-six gravity battery cells. In June, 1880, there was retention of urine for thirty-six hours on two occasions, the patient from delicacy not mentioning the fact until afterwards. This was followed by an attack of acute cystitis, attended with fever, great pain in the bladder, and abundance of pus in the urine. Under appropriate treatment the acute symptoms subsided, but left behind them a chronic inflammation of the bladder. From the beginning of the cystitis until the following winter the patient was unable to pass water voluntarily, and the catheter was used regularly.

The principal treatment of the chronic cystitis was repeated daily, washing out of the bladder with a one-per-cent. solution of carbolic acid. Her condition steadily improved; but in July, 1880, there occurred an extension of the diseased process to the pelvis of the left kidney, accompanied by diminution of urine, and great pain and tenderness over the region of the kidney.

The following is the result of an examination of the urine by Dr. E. M. Schaeffer, microscopist: "July 21, 1880.—Color, pale; turbid; reaction acid; specific gravity, 1.014; no albumen (except in pus). Microscopically examined: copious deposit of muco-pus; bladder-epithelium in small amount; no triple phosphates; one pale cast seen after careful search. I do not think the pus is from the bladder in this case."

Dr. S. C. Busey saw the patient several times in consultation, and coincided in the diagnosis.

Other symptoms than those arising from the bladder and kidney, already mentioned, were alternating constipation and diarrhœa,—now easily controlled, however,—obstinate vomiting, violent headache, and sleeplessness.

Hypodermic injections of morphia relieved the headache, after many other remedies had been tried, but the morphia seemed to increase the vomiting and intensify the insomnia. After the failure of bromides to cause sleep, a trial was made of the fluid extract of Jamaica dogwood (*Piscidia erythrina*), which, when given in teaspoonful dose at bedtime, usually secured a good night's rest. The piscidia, however, was frequently rejected by the stomach, and it was further observed that it had no effect in relieving pain. When pain accompanied the insomnia the Jamaica dogwood did not cause sleep. It was further noticed that it did not cause constipation, but, on the contrary, the bowels were usually moved spontaneously the day following its administration. At one time—latter part of August, 1880—the vomiting was so constant that nothing was retained,—neither medicine nor nourishment. During this period nourishment was given by the rectum, and medicines hypodermically.

The above condition continued, with very little change, the patient being confined to bed, until November 15, when symptoms of pyelitis of the other (the right) kidney developed: great pain and tenderness in the region of the right kidney, with very marked diminution in the quantity of urine, so that for ten weeks it did not average above two ounces daily. This contained a large amount of pus, and at times had a putrid odor. At one time, for seven days (from December 16 to 23) not a drop of urine was excreted, although the catheter was introduced twice daily. Extreme uræmic symptoms developed. Dry skin, but no itching; incessant vomiting; nervous restlessness and twitchings of the limbs, flushed face, severe headache, confusion of vision, and delirium at times. This attack was tided over by the free use

of pilocarpin, and the secretion of the kidneys returned.

A record was kept of the amount of urine excreted, and this shows that from January 22, 1881, to February 2 (eleven days), not a drop of urine was passed from the bladder, the catheter still being used twice daily, and from January 22 to February 12 (twenty-one days) but thirty-six grains, or a little over two ounces of urine, were passed. Previous to December 16 the hot bath and hot pack were resorted to several times for the purpose of producing sweating, but unsuccessfully. An attempt was made to give infusion of jaborandi, both by stomach and rectum; neither was retained. Then the solid extract in gelatin-coated pills was tried by stomach, but rejected. Finally, on the 16th of December, I commenced giving hydrochlorate of pilocarpin hypodermically, in dose of one centigram (gr. $\frac{1}{6}$). The patient was wrapped in a warm blanket, with bottles of hot water around her, previous to the administration of the hypodermic. It is to be observed that the hot bath and hot-bottle packing had been used previously without causing diaphoresis, and on two or three occasions where the hot packing was omitted the sweating from the pilocarpin was not nearly so profuse. Between the dates of December 16, 1880, and February 22, 1881, twenty-two "sweats" were administered, requiring the use of thirty-five or forty centigrams of pilocarpin. As the patient became accustomed to the medicine, it was found necessary to give two powders (two centigrams) of the pilocarpin to obtain the desired effect.

The action of the drug was carefully noted, and was as follows. Immediately, almost before the needle was withdrawn, the face and neck would flush up bright red, and dimness of vision be noticed. This was shortly followed by palpitation. In three minutes, slight nausea; eyes, nose, and mouth beginning to water, and skin showing moisture. In seven minutes, free vomiting, profuse sweating, and salivation. The action of the drug lasted from four to six hours.

An analysis of the phenomena produced results as follows:

Vomiting.—The vomiting continued throughout the "sweat" almost without intermission, and was the most distressing symptom of the ordeal. After a spell of vomiting, the patient would lie back on the pillow, hoping for a rest, when it would again return. The odor of the ejecta during February was very offensive, like decayed vegetable matter. The amount discharged in this way, which, of course, includes the saliva, was never less than two quarts, and often as much as a gallon. The patient states that she did not swallow the saliva, and insists that a large portion thus brought up came directly from the stomach. This would indicate that the pilocarpin also causes a fluid discharge from the stomach. Nausea and vomiting ceased as soon as the effect of the medicine passed off, and food was taken and retained, although previous to the "sweat" the stomach would reject everything.

Salivary glands.—In the beginning of the "sweat," water flowed freely from the eyes and nose, as well as from the mouth, but when salivation was fully established the eyes and nose ceased to discharge. The saliva was viscid and tenacious, so that to clear the mouth it was necessary to use a handkerchief. Its flow was so profuse that after thus clearing the mouth she would not have time to get a drink to quench thirst before the mouth would again be filled; so also talking connectedly was altogether prevented. Water drunk during the sweat at no time exceeded a gobletful.

Perspiration.—First noticed on forehead and neck; then the skin of the whole body, which had previously been dry and harsh, became moist. When sweating was fully established, the water ran in little streams over all parts of the body; in the face it was with difficulty kept out of the eyes. In five minutes the hair would be saturated, and, though wiped dry, it would be again soaked in a very short time. In odor the perspiration was offensive, and on several occasions had a distinctly urinous smell.

Action on heart.—Pulse became rapid in a few minutes, and when the action of the drug was fully established a thumping palpitation added to the distress, aggravated by the vomiting. This "thumping" could be heard at a distance of six feet, and continued with decreasing violence until the close of the paroxysm. The pulse ranged from 120 to 136, and was weak and compressible.

Bowels.—Just as soon as the perspiration was freely established, the bowels moved, always a large action, and on several occasions were moved more than once.

Eyes.—Pupils contracted to a small point. Sight became impaired at the first rush of blood to the face, and the dimness continued to increase, until it was impossible to distinguish objects beyond the foot of the bed. As the effects wore off, the exhaustion was extreme; pulse 130 and feeble; but there was a grateful sense of relief, and a disposition to sleep even before the sweating ceased. The head was no longer dizzy; pain in the kidneys less; stomach free from sickness, and the tongue free from coating. A quiet sleep followed, lasting several hours, from which the patient awaked refreshed and hungry.

Amount of fluid discharged during a "sweat."—This, of course, could only be estimated. Fluid from the acts of vomiting was caught in a basin, which was emptied when one-half or two-thirds full three or four times, and each time contained not less than a quart.

The blanket in which the patient was wrapped was saturated, as was also a folded sheet under the blanket. The pillow was saturated through, and the bolster beneath wet.

An experiment was made of saturating the blanket to as near as possible the same degree as when used in the sweat, and five pints of water were required. We have, then, this calculation:

By vomiting and saliva . .	7 pints.
" saturated blanket . .	5 "
" sheet, pillow, and body-clothes	2 "
	14 pints.

This seems almost incredible, but I believe the amount stated is strictly within the truth. The patient and her attendants think that the amount is understated, rather than exaggerated.

Since February 22 no pilocarpin has been administered, the symptoms having so much improved that it did not appear to be demanded. The symptoms of congestion and inflammation in the right kidney gradually disappeared, and the excretion of urine returned.

The amount of urine from that date up to the present time (June 1) has varied from a few ounces up to one and a half pints (March 3, 1881). In February the use of chloroform by inhalation was resorted to for the purpose of warding off impending convulsions. It had a very happy influence over the nervous symptoms, and appeared also to increase the amount of urine. Several times was its use followed by an increased flow of urine.

It is unnecessary, and would be tiresome, to record in detail the treatment employed to meet individual symptoms in this case. Her present condition, while it cannot be termed convalescent, is, under the circumstances, eminently satisfactory. The right kidney seems to be well; there is still pain in the left kidney, and occasionally muco-pus in small quantity in the urine. She is now able to sit up a portion of each day, and has been out to ride several times. Dr. S. C. Busey saw the patient frequently in consultation.

CHANGE IN THE COLOR OF THE HAIR.

I send four specimens of the hair.* The first, taken November, 1879, and the second, November, 1880, are as nearly as possible the same color, *a light blonde with a yellow tinge.* The third specimen, January 12, 1881, is a *chestnut-brown*, and the fourth, May 1, 1881, *almost a pure black.* The growth of the hair has also been more vigorous and is thicker than formerly. It is also much coarser, as is readily seen by a comparison of the specimens.

Dr. Emil Bessels, of the Smithsonian Institution, has made a microscopical examination of the hair, and reports that it is in every respect normal, that the change in color is due to an increase of the normal pigment, and not to a dye. The dark hair is shown to be much coarser than the light. Accompanying the change in the hair of the head there has been a corresponding change of color of hair upon other portions of the body,—not, however, to so marked a degree. In the axilla the color is about that of the specimen of January 12, 1881. There has been also a change in the color of the eyes, from a light blue to a dark blue. The use of the pilocarpin was commenced on the 16th of December, 1880. The hair was first noticed to be changing color December 28, 1880. As to subsequent changes the specimens speak for themselves.

The important question here presenting itself is, Was this change of color due to the pilocarpin or to some other cause? I have not seen such an effect noted as the result of jaborandi, yet there seems to be in this case no other reasonable explanation. The disease can hardly be charged with it, for uræmia is of too common occurrence for such an effect to have escaped observation, even though it were only occasional. Nor have we any reason to suppose that the change was due to the combined effect of uræmia and the jaborandi.

The change had not commenced in the latter part of November, 1880, when specimen No. 2 was taken. The pilocarpin treatment was begun on the 16th of December, 1880. Twelve days later it was first noticed that the hair was of a darker color, and from that date the alteration was rapidly progressive.

It is well established that jaborandi increases the nutrition of the hair, stimulates its growth, and renders it thicker. Changes in the color of the hair are of frequent occurrence as a result of sudden violent emotions, such as fright, great grief, or even sudden joy: the change, however, is always from dark to white. But a rapid change from light to black I have seen nowhere recorded. The flaxen hair of childhood becomes gradually darker during adolescence; but usually no further change takes place after adult life is reached.

After protracted illness, such as typhoid fever, it frequently happens that the old

* These specimens received: they correspond with description.—Ed. *P. M. T.*

hair falls out and the new growth as it appears is of a darker color. The change, however, does not take place in the old hair. In mammals and birds, however, we have numerous instances of changes of color in both directions,—from dark to light, and the opposite, this change being due not merely to new growth, but to an actual alteration of the color of existing hairs or feathers.

Dr. Weinland investigated this subject from museum specimens, and was led to the conclusion that change of color was due to increase or diminution of oily matter. The fresh feathers were examined from the breast of a merganser, and the red color found to be due to numerous lacunæ filled with a reddish oil-like fluid. When dried, the feathers bleached, and it was then found that the lacunæ were filled with air only.

According to this theory, an increase of nutrition would have a tendency to darken the hair, and *vice versâ*. This is borne out by the fact that dark or black hair is almost always thicker and coarser than light hair, and also by the change in hair to gray and white as age advances and the processes of nutrition become enfeebled. So also when the hair is thin, shaving the scalp will generally cause it to become thicker, firmer, and darker. This can only be through the influence of nutrition.

It gives us a clue also to the *modus operandi* of the change in the case here reported, for we know by clinical experience that pilocarpin increases the nutrition of hair, as shown by its augmented growth.

We have therefore in this case both positive and negative evidence in support of the view that the change in the color of this patient's hair was due to the pilocarpin.

This case has been one of unusual interest, and in closing the report it will be profitable to recapitulate briefly the points worthy of note.

1. The prolonged period of total suppression of urine. In one instance this extended over eleven days, and for twenty-one days the anuria might have been almost considered total, the daily average being less than one teaspoonful.

2. The value of the pilocarpin in eliminating urea from the system and averting the consequences of uræmic poisoning. The usefulness of this drug in uræmia and in the various forms of dropsy is coming to be well known, but it seldom happens that its beneficial effects are so strongly marked as in this case. The uræmia was extreme, and the case at one time so apparently hopeless that it became a serious question whether we were justified in pursuing a course of treatment so distressing to the patient. Dr. Bartholow says of pyelo-nephritis, "When uræmic symptoms occur, the duration is measured by weeks, and but one termination is possible." (Pract. Med., p. 469.)

In this case much of the success of the treatment was undoubtedly due to the patient herself. She is of a bright, sunny disposition, and has been upheld throughout her illness by a positive determination *not to die*, and she seconded most faithfully the efforts of her physician in her behalf.

3. The amount of fluid eliminated during a "sweat." I have hesitated to state the amount (fourteen pounds), which is about one-seventh of the body-weight, because it seems almost incredible; but a careful reconsideration satisfies me that the statement is not exaggerated. I think it probable that the amount was increased by the hot-bottle pack.

4. The effects produced in this case by the pilocarpin upon the stomach and bowels would indicate that it excites a watery discharge from their mucous membranes as well as from the skin and salivary glands.

5. The hypodermic use of pilocarpin. The hydrochlorate is perfectly soluble, and its use under the skin is unattended with pain or irritation. Its action hypodermically is more prompt and the effects are sooner over than when it is administered by the stomach. It has been recently stated that the jaborandi contains another alkaloid, jaborin, which is antagonistic to pilocarpin. If this be true, it is decidedly preferable to use the pilocarpin rather than the leaves.

6. The change in the color of the hair. If I have properly attributed this to the action of the medicine, it would seem to add another to the marvellous effects of this agent upon the human system.

7. There was no dropsy in this case. In two other cases of pyelo-nephritis occurring in my practice which resulted fatally there was no dropsy. Uræmia, or rather anuria, is not sufficient to cause dropsy, but combined with a drain of albumen (albuminuria) dropsy soon results.

AIDS TO DIAGNOSIS IN NASAL DISEASE.

Read before the Philadelphia County Medical Society, April 13, 1881,

BY HARRISON ALLEN, M.D.

IN making a diagnosis of nasal disease considerable difficulty is acknowledged. The nasal chambers are intricate in their outlines, the apertures permitting inspection are small, and the various structures seen therethrough are foreshortened to the eye.

TO EXAMINE THE NASAL CHAMBERS.

The following rules have been framed with the object in view of simplifying the examination and to properly interpret what is seen.

1st. Bring the shoulders forward and throw the head far back. Insert the speculum. The under surface of the middle turbinated bone will be seen at its anterior part, provided no undue narrowing of the chamber exists. In the same position, inspect the chink between the anterior end of the middle turbinated bone and the outer wall of the vestibule.* Make such use of the probe as may be indicated to ascertain the condition of the mucous membrane, and the nature of the points of contact (if such should exist) between the median and lateral walls.

2d. The shoulders to be in the same position as in the preceding. The speculum being in place, bring the head slightly forward. The middle turbinated bone now passes from the field, and the ethmo-vomerine sutural projection, if such exists, becomes visible. When it is present, the posterior portion of the middle turbinated bone, the ethmo-vomerine projection, and the superior curved portion of the inferior turbinated bone are occasionally seen to be in contact with one another. No obstruction to breathing need follow upon this arrangement, provided the inferior portion of the chamber remains open. In other examples, the parts just mentioned are separated from one another when a black curvilinear chink exists between the inferior turbinated bone and the septum. If this chink does not exist, by reason of the pressure of the sides against one another, distress is very apt to be acknowledged. During treatment the chink can be defined at the time the patient reports improvement. In yet another group of nasal chambers the parts in question are remote from one another, and the lower portion of the wall of the sphenoid sinus is seen, together with the upper portion of the choana.

3d. The shoulders still being forward, the head is brought in a horizontal position. The space between the sides of the inferior turbinated bone and the septum is now seen through the speculum. If the chamber is capacious, and the anterior osseous aperture large, the plane of the opening of the inferior meatus is visible and situate about half-way up the outer side of the field. If, however, the parts are everywhere contracted, the plane of the inferior meatus-orifice is not seen, or, if it is seen, its upper portion only is discernible.

Such inspection as is practicable of the middle meatus can be made either in the second or third positions.

4th. Preserving the forward position of the shoulders, as before, bring the head well down on the chest. Insert a small-calibred speculum and push it as far inward to the lower portion of the anterior osseous aperture as is possible. The floor of the nasal chamber is now seen at its anterior part. The chink between the anterior end of the inferior turbinated bone and the floor, and the floor of the vestibule itself, are all visible. This field is frequently obstructed by an outgrowth from the septum, either maxillary or vomerine in nature. Should hypertrophy of the inferior turbinated bone exist, the chink between the bone and the floor of the nose is obliterated.

TO DETECT THE SIGNIFICANCE OF TRACTION-BANDS.

The history of recurrent obstruction from angiose turgescence can be confirmed by the presence of cobweb-like threads of mucus stretching across the chamber from the lateral to the median wall. The following explanation is ventured upon: the surfaces once in contact have separated, but give evidence of their former position by these traction-bands.

TO DETECT OBSTRUCTION.

Close the mouth and the nose of the opposite side; then bring the shoulders forward and throw the head back. Request the patient to breathe. If the sound is sniffling, especially if the act be associated with adduction of the lateral wall of the external nose above the wing, obstruction exists. Then insert Zaufal's speculum in the premaxillary portion of the nose. Re-

* By vestibule is meant the interior of the external nose.

peat the breathing-test. If the sniffling is now relieved, obstruction of the vestibule or the premaxillary region may be diagnosed. Should the sniffling persist, push the speculum into the maxillary portion, and in succession to the palatal, renewing the test of breathing in each instance; or, the small rubber speculum being in position, raise suspicious folds of mucous membrane with a probe and request the patient to breathe. Such improvement of breathing after thus pressing aside the turgescent folds furnishes a clue to the nature and location of the obstruction. The presence of mucus in the nasal chamber can be detected by its motion forward and backward during respiration, when conducted in the manner above described.

TO PREPARE A NASAL CHAMBER FOR EXAMINATION WHERE GREAT NARROWING EXISTS FROM CONGESTION OF THE MEMBRANES.

Apply a primary current of electricity from two to six cells. The cathode should be placed over the cheek below the infra-orbital foramen, and the anode on the nape of the neck or at the mastoid fossa. After the current has passed for five minutes the patient will announce the fact that the obstruction is relieved. Inspection can now be made of the deeper parts with ease. Should the obstruction not yield to this test, a diagnosis of infiltration of the tissues may be made. An excessively angiose condition of the membranes accompanied with hyperæsthesia is rarely seen, which will not yield to the current. These applications are not only aids to diagnosis, but are often in themselves curative. Obstruction not due to turgescence or infiltration may be proved to be osseous by the probe.

TO DETERMINE THE CONDITION OF THE MEMBRANES BY THE REFLECTION OF LIGHT THEREFROM.

A moist surface yields a broad, brilliant reflection. A dry one yields a diffused, dull reflection, which at the same time that it is diffused is broken up into minute points of light.

A mammillated moist surface will throw off multiple reflections, but a uniformly convex surface will throw a single large pencil of light.

TO EXAMINE THE CELLS OF THE NASAL MUCOUS MEMBRANE.

A double angulated probe passed into the normally constituted space between the lower turbinated bone and the septum, and drawn forward at the same time that it is pressed firmly against one of the sides, can be withdrawn, bringing with it a drop of the mucus of the region through which it has passed. This drop, when examined with the microscope, will show characteristic epithelial cells, with active cilia. The cells are deformed in outline, without cilia, and otherwise changed, in mild forms of atrophic degeneration of the turbinated bones,—deformed, without cilia, and excessively granulated in the infiltration of syphilis,—or absent in angiose turgescence and in advanced forms of atrophic degeneration. Angiose turgescence exists in hay fever and some forms of catarrh, associated with hyperæsthesia, simulating hay fever. In such diseases the cells are not easily detached, and cannot be found in the mucus.

For clinical purposes the nasal region may be divided into the premaxillary, the maxillary, and the palatal portion. If sections be made by sawing the skull in frontal (transverse vertical) planes at the lines of sutural union on the hard palate, viz., between the premaxillæ and the maxillæ, and between the maxillæ and the palatal bones, subdivisions of the nasal chamber are secured which embrace more or less natural regions. The premaxillary portion includes the vestibule and the nasal chambers proper, so far as to embrace the anterior ends of the turbinated bones. The upward extension of the section would answer to the anterior border of the anterior cerebral fossa. The maxillary portion includes the turbinated bones within the point last mentioned and the hinder ends. The palatal portion includes the hinder ends of the turbinated bones and the region extending thence to the posterior nares.

SEQUEL TO THE CASE OF ARSENICAL PARALYSIS

DETAILED IN A CLINICAL LECTURE ON ARSENICAL PARALYSIS PUBLISHED IN THE PHILADELPHIA MEDICAL TIMES, MARCH 26, 1881,

BY J. M. DA COSTA, M.D.

JUDGING from the communications that have reached me, the lecture on arsenical paralysis and the case therein reported have proved of interest to many physicians. I believe, therefore, that it may not be unacceptable to record the sequel to the case. It is easily told. It was one of steady improvement, suspended

for a time by the ulceration around the toes, particularly the great toes, which proved to be due to ingrowing toe-nails. When these were remedied, the patient began to walk around again, though the enforced confinement which the discomfort in his locomotion had entailed put him back for three weeks, and on getting up his walking was less easy than formerly, owing to a contraction of the tendo Achillis of both legs; but this yielded to massage, and the favorable progress of his symptoms was unchecked by further mishaps. The erythematous rash on the soles of the feet lasted but a few days, and passed off when the acetate of potassium was substituted for the iodide, and under an ointment of oxide of zinc. With but slight variations, his treatment consisted, during the last months in the hospital, of iodide of potassium and cod-liver oil; faradization and massage were also used. There never was a drawback in the amelioration of his mental condition after it had once fairly set in; the state of his legs improved up to the point that he could walk around with a cane, but there was still considerable palsy, especially in the muscles of the anterior tibio-fibular region, and their electro-muscular contractility remained much impaired. It was in this condition, but in very good general health, that he left the hospital on the 6th of May. I will add that during the period in which I had charge of him, and subsequently while under the care of my colleagues, he never had the least sign that pointed to a syphilitic infection; indeed, neither sore throat, nor enlargement of the post-cervical or inguinal glands, nor falling of the hair, nor node, nor bone-pain, nor substernal tenderness, nor specific eruption, was at any time to be found; enabling the repetition of the statement made in the lecture-room, that he had never had secondary symptoms.

In this connection, too, it may be proper to add that a fuller knowledge of the case makes me question whether he ever had syphilis at all, even of a non-infecting kind. The history of syphilis was obtained on his admission to the hospital, but, owing to his wretched mental condition, would not have been accepted at all if it had not been corroborated by his friends. Yet, as he regained his mental health, he repeatedly said that he had been told, while under care outside, that he would not have syphilitic symptoms; and on inquiry from Dr. Walter F. Altee, who had attended him, the fact was elicited that it was in May, 1880, and not in September of the preceding year, that the patient had had a violent gonorrhœa, followed by balanitis and a few superficial ulcers on the glans, and by a suppurating bubo in the left groin. This distinguished surgeon did not believe the phenomena to be syphilitic, and not under any circumstances those of an infecting chancre: hence his remark to him that constitutional symptoms would not ensue. It may not be without interest to state that Dr. Atlee has seen him repeatedly take large pinches of arsenic—probably from five to ten grains—out of a paper carried in his vest-pocket.

On another point, too, of the early part of the case, I now possess additional information. While still under the influence of the acute poisoning, and before I saw him, an erythematous eruption was perceived on the chest and abdomen, as mentioned in the published lecture-notes. I had supposed it to be one of the forms of eruption which we all know occur at times in arsenical poisoning; and this it evidently was. I have acertained it from those who saw it to have been an erythematous flush chiefly occupying the front of the chest, here and there slightly raised, as if the skin were swollen, having on the outskirts of the large patches smaller spots like roseola, but all of vividly red color, and occurring in three successive outbreaks, the skin becoming of normal appearance between them. The longest of these outbreaks was the first; it lasted six days, was attended with considerable itching, or, rather, burning, and followed by slight desquamation. The other outbreaks were from three to four days, and presented the same phenomena, although not quite so marked. The patient was not at the time taking iodide of potassium, or, indeed, any specific treatment. The character of the eruption impresses me very much like the disseminated patches in connection with a papular eruption described by Imbert-Gourbeyre as due to arsenic.

Re-examinations of the urine never showed anything abnormal. I regret that it was not examined for arsenic. But I do not think that, except early in the case, arsenic would have been found in the urine. I learn from a quite recently published instance of arsenic-poisoning followed by paralysis, by Seeligmüller, in the

Deutsche Medicinische Wochenschrift, April 16, 1881, that even in a very pronounced instance it may not be detected. The gums always showed the same appearance; they never presented any metallic line, but always a burnished, porcelain-like look, similar to the gums of false teeth.

Since the patient has left the hospital, I have seen him several times, once within a few days. He has stopped the iodide for over a month, and is taking tonics, chiefly of pyrophosphate of iron and of strychnia. He is constantly improving in strength, and walks a couple of miles daily. He has pain in his feet after walking, and for a time in his limbs, but only then if the exercise has been too severe for him. He walks aided by his cane, although not dependent on it, and with the shuffling gait of a paraplegic. He can stand and walk with his eyes shut, although with greater difficulty than when they are open. It is not likely that he will improve very much more: he has probably almost reached the highest point of his recovery.

A NEW HYGIENIC APPLIANCE.

Remarks before the Philadelphia County Medical Society, Wednesday, March 23, 1881,

BY BENJAMIN LEE, A.M., M.D.

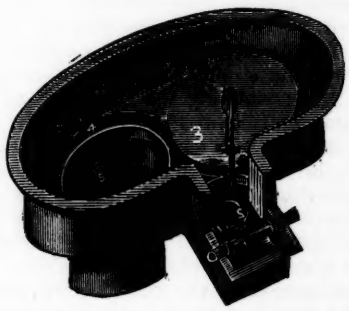
AFTER the eloquent lecture from Dr. Wood to which we have been listening, and the extremely interesting discussion which has followed it, I fear that to many of you the descent to the consideration of a water-closet will seem the step from the sublime to the ridiculous. With the Roman philosopher, however, I say, "*Humani nihil a me alienum puto.*" I hold nothing which concerns the comfort and welfare of the human being foreign to the province of the physician.

Independently of leakage, sewer-gas enters our homes in three ways. The water-seal of the trap of the water-closet, stationary wash-stand or wash-tub, or bath, as the case may be, may become inefficient, 1st, in consequence of the water falling below the protective level from evaporation, when the appliance is for some time unused; 2d, from what is called siphoning,—that is, the production of a vacuum in the soil-pipe by the sudden rush of water from a closet on a higher level, which sucks out the water from the trap; and finally, in consequence of saturation,—that is to say, the water slowly absorbs the gas in contact with its sewer surface until it becomes entirely saturated: as soon as this has taken place it begins to give it off at its closet or basin surface as rapidly as it receives it at the other.

This last is perhaps the most dangerous, because the most insidious, form in which the poison finds access to our homes. It is that which takes place all through the night from the wash-stand which is by our bedside, or the bath-tub in the adjoining dressing-room, while the water-closet is more apt to be in a distant part of the house and quite distinct from sleeping-apartments. The appliance to which I now call your attention affords a complete remedy for this evil as long as it is in position. During the brief time in which the closet is in use it is not operative; our protection then must be in the water-trap, which still exists below this, and in ventilation. And I would here briefly say, in passing, that thorough ventilation is a *sine quâ non* in sanitary plumbing. No system of plumbing should now be introduced into any house which does not include a ventilating shaft as large as the soil-pipe, having its top above the roof of the house, and running, if possible, along the smoke-stack, so that the heat thus communicated may create an upward draft.

With the aid of this model I think you will have no difficulty in understanding the contrivance, which is simple and not easily disarranged, although, at the same time, a very beautiful piece of mechanism.

The hole which you observe in this metal casting is just the size of the top of



the soil-pipe, and is continuous with it, being below the hopper and above the water-trap. Around the edge of this hole and on the upper surface of the casting is a trough about three-fourths of an inch deep. This movable cap which I now

show you is provided with a flange on its under surface exactly corresponding to the

trough. Now, it will readily be understood that so long as this flanged cap sits in a fluid in the trough, provided this fluid is impervious to gases, so long is the passage of gas beyond it a physical impossibility. Such a fluid we find in mercury. It cannot evaporate; it is too heavy to be siphoned out; and it does not absorb gases. Its loss from oxidation is so slight as to be almost imperceptible. This cap is moved on and off from the opening of the soil-pipe by means of an ingenious contrivance known as "Spratt's Movement," in which the opposite end of the lever which is attached to its upper surface articulates, as you see, by means of this spherical head with a deep spiral groove on a horizontal shaft. This shaft is attached by a sort of crank-rod to the cover of the seat. Now, as I lift the cover I also lift the cap and throw it to one side in a chamber provided for the purpose; as I shut down the cover I replace the cap, and the seal is perfect. This appliance can be adjusted to any water-closet of whatever description. In case of there not being sufficient thickness of joist to allow of its being set under the floor, the seat must be proportionately raised,—say about three inches. This slight inconvenience can be met by placing a low step in front of the seat.

So much for the water-closet. I now show you the seal for the wash-stand and similar arrangements. It is made of glass, so that if out of order the fact can be detected in a moment. It consists of a cylindrical glass reservoir closed at the top and admitting the waste-pipe through its bottom. The waste-pipe ascends to within about two-fifths of the distance from the top, terminating in a free extremity; over this free extremity sits quite loosely a glass cup like a small tumbler turned upside-down. At about the level of the free extremity of the waste-pipe there is a hole in the side of the reservoir for the escape of the water.

As in the case of the water-closet seal, mercury is again used as the sealing fluid. Here it covers the bottom of the reservoir to a depth of half an inch or more. The working of the appliance is as follows. When a stream of water enters from below, it lifts the inverted glass cup out of the mercury, as I now lift it with this penholder. Flowing out under the rim of the cup and over the surface of the mercury, it fills the reservoir and escapes at the opening in its side. The moment the current ceases, the cup falls back into its place, and should there be any reflux of gas it exerts its pressure on the top of the cup, thus firmly holding it in the mercury and adding to the security of the seal.*

STRANGULATED FEMORAL HERNIA—OPERATION—BOWEL RUPTURED—DEATH.

BY CHARLES W. DULLES, M.D.,

Surgical Registrar to the Hospital of the University of Pennsylvania.

ON May 14, 1880, I was called to see Mrs. A., aged 87 years, an inmate of the Philadelphia Home for Incurables. She had been admitted to the Home more than two years before with an incurable chronic rheumatism and chronic bronchitis. Her hands presented a remarkable and extreme picture of the effects of arthritis deformans, the fingers being abducted and flexed until they overlapped each other like the claws of a fowl, and it was necessary for her to have a piece of linen pushed under them to prevent excoriation of their skin and that of the palms.

When called to see her, her case had not been deemed very urgent by her care-takers at the Home. She had, however, had persistent constipation and vomiting for about thirty-six hours, and complained of colicky pains in the abdomen. On examining her, I found that she had a strangulated left femoral hernia. The account I obtained of the condition of the parts previous to this attack was uncertain, but left no doubt in my mind that the hernia was comparatively recent. The tumor was red, inflamed, œdematous, and very pain-

* These appliances are designated as the "Evans Sewer-Gas Mercury Seal," and may be inspected at 239 South Sixth Street.

ful, half spindle-shaped, about three inches long and half an inch in elevation, and lying just below and parallel with Poupart's ligament. The persistent vomiting, the pains, and my inability to reduce the tumor by moderate taxis, brought me to the conclusion that the case demanded operation. I then secured the advice and co-operation of Drs. Keen and Judd, and Messrs. Griffith and Jayne,—office students of the former,—and, ether having been administered, made another effort to reduce the bowel, seconded by Dr. Keen, and, this failing, proceeded to operate, under the carbolic acid spray, in the method of Lister. The tissues were divided down to the sac, and an attempt made to reduce *en masse*. In doing this the sac was burst, and a very small quantity of fluid with a fecal odor escaped. Very soon, however, the bowel receded within the abdomen, and the wound was cleaned, sponged out, and closed. A few strands of carbolized silk were laid below the sutures, so as to depend from the lower angle and effect drainage. Over all were placed the antiseptic layers recommended by Lister. The ether was suspended, and brandy, milk, and lime-water ordered to be given by the mouth at short intervals.

The vomiting did not return after the operation, but the patient never rallied. She recovered consciousness, and had little suffering, but steadily sank, until she died the next afternoon, twenty hours after the operation.

The next day a post-mortem examination was made. On opening the abdomen, no evidence whatever of recent peritonitis was found, except about the internal opening of the femoral canal, to which a transverse coil of the ileum and a fold of the omentum were slightly adherent. On pulling the intestine away, it was seen that a knuckle about an inch and a half long had lain across the opening of the femoral canal, into which a part of one side only had been pushed and tightly strangulated in such a manner as almost entirely to occlude its lumen previous to the operation. The hernial portion was discolored and gangrenous-looking, and in it there was a small opening, which Dr. Keen thought to have been made in separating it from its adhesions at the autopsy.

I removed a portion of the intestine about three inches long, and took it away for subsequent and more detailed examination.

On making this, I found the bulging portion that had descended and been strangulated was in parts thick and congested; at its lower curve, however, it was very much thinned in several places, and had two small openings. One of these may well have occurred at the autopsy in breaking up the recent peritonitic adhesions; but the other, I am inclined to think, had occurred before the operation, because its edges were too abrupt and too well defined to seem to me like tears. The impression that suggested itself to me when operating, on account of the odor that was emitted when the sac gave way,—namely, that the bowel had been loaded and burst by the effort to reduce it,—remains with me. Yet, as already stated, there were found at the autopsy no evidences of the escape of any fecal matter into the abdominal cavity, nor any inflammation,—only a little lymph, causing the bowel to adhere to the edges of the femoral ring. The patient's death seems to have been due to the fact that her great age and her chronic invalidism made it impossible for her to survive the depression due to thirty-six hours' strangulation of the intestine, with the added strain of a grave surgical operation.

April, 1881.—The specimen showing the rents in the intestine I gave to Dr. Formad, who made sections of them and examined them microscopically. He informs me that the openings presented no evidence of ulceration, but were undoubtedly traumatic, being simple ragged solutions of continuity.

I am therefore convinced that I was right in believing that the bowel was burst during the operation, in the effort to reduce it after the sac had been opened. No very great force was used, but certainly too much for the resistance of the thin, old intestine.

Some years ago I assisted at the first operation for strangulated hernia that I ever saw, and I well remember the solicitude with which I watched the force used by the operator in reducing the gut. At a later period I was called, in the ambulance service of the Philadelphia Hospital, to a man who had been stabbed in the abdomen, and from whose belly a few inches of intestine had protruded. What I considered reasonable efforts to reduce it being unsuccessful at the place where I found him, I kept the bowel wet and transported him to the hospital. Here he fell into the hands of another resident surgeon, whose violent efforts I thought would surely burst the bowel; but, to my surprise and relief, they only sent it back to its proper place, and the patient made a good recovery.

These cases gave me an idea of the toughness of the bowel which I could not otherwise have entertained. They did not lead me to employ any unusual force in the operation I have just narrated, but they heightened my surprise at its result. The moral, it appears to me, is that in an old person scarcely any force can be called safe, and that the freest possible opening should be made before any attempt to reduce a hernia that has been strangulated.

NOTES OF HOSPITAL PRACTICE.

LOUISVILLE CITY HOSPITAL.

CLINICAL LECTURE BY WM. H. WATHEN, M.D., OF THE KENTUCKY SCHOOL OF MEDICINE.

Reported by A. H. Kelch, M.D.

LACERATION OF THE CERVIX UTERI.

GENTLEMEN,—This woman says she is 28 years old, the mother of four children, and that she has had good health until the birth of her last child, four years ago. Since then she has never been well. Her bowels are constipated, her appetite poor, her digestion and assimilation much impaired. She is pale, anæmic, and extremely nervous; her menses have not returned since parturition, but were always regular and normal before. She has been confined to bed most of the time, and has seldom been able to take active exercise. She has had pain and soreness in the iliac regions (worse in the left), a sense of weight and pressure in the pelvis, and a constant, profuse, and tenacious leucorrhœal discharge. She has sympathetic disturbance of the heart, and complains of pains in her head, back, and limbs.

These subjective symptoms are diagnostic of some uterine trouble, but are common to many uterine diseases, and are pathognomonic of none. They do not enable us to arrive at any positive diagnosis, but indicate the necessity for a physical examination by which we may avail ourselves of the more reliable objective symptoms. In a digital examination I find the uterus prolapsed and apparently retroverted, and the cervix lacerated on the left side up to the vaginal junction. . . . Having exposed the cervix with a bivalve speculum, we see that both lips, particularly the posterior, are enlarged, and that the mucous membrane in and around the os is inflamed. The laceration is seen to be nearly healed over. The sound shows that the uterus is completely retroverted, and it causes pain when I press the point against its walls. The cavity measures three and a half inches, and since withdrawing the sound there is some bleeding from the os. There are no adhesions binding the uterus down, and it can be placed in its normal position by rotating the sound. We now recognize laceration of the cervix, retroversion, and chronic endometritis; but we must know more about the cause and results of these troubles and the relation one bears to another before we are prepared to adopt a plan of treatment. From our own experience and the researches of Emmett, Goodell, and other authorities on this subject, we conclude that the cervix was lacerated at the last labor, and failure to unite prevented healthy involution, causing permanent enlargement of the uterus, with its natural consequences, inflammation and displacement. This laceration is easily recognized by the finger and by sight; but there are cases where the diagnosis is made with difficulty even by experienced gynæcologists and not at all by the general practitioner, who often knows very little about this subject and treats such patients with strong caustic applications for simple cancroid or cancerous ulceration of the cervix. That laceration does frequently occur in labor, and often remains as a permanent lesion, is now pretty generally recognized and understood in gynæcological circles. Emmett discovered the character and the treatment of this lesion in 1862, and published his first paper on the subject in 1869. Since then, in his papers and in his work on gynæcology, he has told us about all that is known on the subject. Dr. William Goodell and many other writers have added valuable papers.

This injury is caused by labor, and may occur in any part of the rim of the os uteri, but is generally on the left side, which is explained by the fact that the occiput is usually in that position. The lesion may extend only partly through the walls of the cervix, or through its entire thickness, and sometimes from the os to and above the vaginal attachment. It may be lateral or bilateral, in either lip or through the conjugate diameter. The lacerations may also be numerous and give the cervix a stellate appearance. There is, perhaps, some laceration in nearly all cases of labor, particularly in the primipara, but it is usually so insignificant that it causes no inconvenience, and disappears in the course of a few weeks. In those cases where the laceration is extensive it is generally the result of rapid labor, early rupture of the membranes, the administration of ergot, and the use of forceps before the cervix is fully dilated. It may also be caused by a tedious and protracted labor, or by an attempt to push the anterior rim of the cervix over the presenting parts.

Rigidity of the os from any cause would predispose to this danger. Hemorrhage is the only immediate symptom that attends the lesion. The cervix is so bruised and swollen that the rent cannot easily be discovered soon after labor: however, if there is constant bleeding after the uterus is well contracted, such an injury may be suspected. Although the rent may extend above the vaginal attachment, the bleeding is seldom alarming, for the utero-cervical artery is so elastic and tortuous and so loosely connected with the parts that it will stretch and thus escape being ruptured. If the laceration is in such a position that the edges are kept in apposition, there will often be union by first intention or adhesion. If the rent is in either lip, or through both, it will generally unite, as the line of division is within the axis of the greatest uterine mobility, and the lateral walls of the vagina will press the edges together. But if the laceration is lateral or bilateral, the division is transverse to the axis of motion, and the vaginal walls give no support. Besides, when the woman gets out of bed the uterus is larger, and its downward pressure causes the vaginal walls to separate the lips and keep them permanently everted so that union is impossible. Even if union does occur while the woman is in bed, the edges will be likely to separate when she assumes the erect posture. If the rent extends above the vaginal attachment or fails to unite by adhesion, there is frequently some pelvic cellulitis or peritonitis developed from the third to the fifth day, the symptoms of which are generally well marked, but may be so masked that the complication would not be detected without a careful physical examination. In such cases convalescence is slow, and the uterus is often permanently displaced and bound down by adhesions. In any event, it requires a long time for absorption of the inflammatory products, and the woman may be a cripple for life.

The triple process of involution—contraction, conversion of superfluous tissue into granular fat, and absorption—is interrupted, and the uterus remains permanently enlarged, causing displacement and inflammation, with a profuse leucorrhœal discharge, and the various local and reflex disturbances that accompany these disorders. The injury may cause but little annoyance until menstruation reappears, for during lactation the blood is attracted to the mammary glands and there is no periodic congestion of the uterus and pelvic organs.

When the laceration has healed over, there may be no symptom that attracts attention unless a nerve be imprisoned and pinched in dense cicatricial tissue and serves as a constant source of irritation, keeping the patient fretful and nervous; failing to heal, the lips become everted, exposing the intra-cervical mucous membrane, which by constant attrition against the vaginal walls and by direct exposure to violence in coition gradually loses its epithelium and is eroded or ulcerated. There may also be follicular, villous, or coxcomb ulceration, and the cervix occasionally has the appearance of the cauliflower excrescence of epithelioma. Subinvolution causes retroversion and prolapsus, puts the uterus within the axis of the vagina, and subjects the cervix to direct injury in coition. The woman becomes a confirmed invalid, and is generally sterile, but may conceive in the worst forms: if so, there is a tendency to abortion, on account of the constant irritation of the cervix and its weak retentive powers. The laceration may be so extensive and the mucous membrane so everted that the canal is exposed to the internal os.

Writers variously estimate the frequency of this injury in all uterine diseases at from five to forty per cent. I have met with a great many of these cases in private and hospital practice, and would put the estimate at fifteen per cent. There is no difficulty in making the diagnosis by the finger or by sight when the laceration has healed over. If the rent is bilateral the finger will detect a transverse fissure, and if lateral a notch in the side. With the cervix exposed the transverse fissure or the notch may be seen. But when the cervical mucous membrane is eroded or ulcerated the diagnosis may be difficult, and the true nature of the malady be entirely overlooked. This condition, or follicular enlargement, frequently causes an ectropium like that of the conjunctiva, and conceals the rent so perfectly that it cannot be felt or seen. But if the woman's bad health dates from the time of her last labor, and she has a profuse and tough leucorrhœal discharge with the cervix apparently eroded or inflamed around the os, which fails to improve under treatment or heals

over and seems to be well but again loses its epithelium when she begins taking exercise or having connection, you may suspect laceration. Though the everted mucous membrane often fills up the cavity between the curled-over lips, making it impossible to detect the rent by the finger or by the sight alone, still with proper care the diagnosis can be accurately made.

Place the woman in any of the recognized positions, but preferably on the knees and elbows, and dilate the vagina with a duck-bill or bivalve speculum. Then with a tenaculum introduced in the vaginal surface of each lip, attempt to bring them together, and the everted mucous membrane will gradually roll into the cervical canal, and finally nearly or entirely disappear, and what was supposed to be the external os is now found to be the opening into the cervical canal upon a level with the fork of the laceration, and is from one-quarter of an inch to an inch above the real os tincæ. I prefer the knee-elbow position because it removes abdominal pressure from off the pelvic viscera, and allows the uterus by gravitation to ascend higher into the cavity, thus enabling us to force more easily the everted membrane into the canal. The rent can now be plainly seen, and what appeared to be an ulceration around the os was the exposed and abraded mucous membrane of the cervical canal.

While many women complain of the symptoms I have mentioned, there are others who suffer very little inconvenience. Just as in some other forms of uterine diseases, what makes one woman a confirmed invalid causes another hardly any annoyance. The peculiar constitution and habits of the woman have a great deal to do with the impression the injury makes upon her system.

The treatment of laceration of the cervix uteri may be divided into the immediate and subsequent treatment; that is, the treatment indicated if the injury be discovered soon after it occurred, and when the woman applies for relief from the symptoms that secondarily result from this lesion. If the laceration is detected immediately after labor, and there is much bleeding, it should be controlled by ice, hot-water injections, injection of a saturated solution of alum, or any local hæmostatic that will not prevent immediate union. If hemorrhage is profuse and it is not arrested by this treatment, introduce a silver suture to unite the edges of the rent. Wash out the vagina once or twice daily with warm or hot water, and, if there is an offensive discharge, add some disinfectant, such as carbolic acid or permanganate of potash. If the edges do not unite, this treatment will generally cause the rent to heal over and make involution more perfect, thereby lessening the dangers of future trouble. These are the measures which constitute the immediate treatment, which, in the event of failure to accomplish the purpose towards which they are directed, are to be followed by the measures which I shall take at our next meeting to establish a complete and permanent cure.

(To be continued.)

TRANSLATIONS.

Dyspnœic Uræmia.—Dr. G. Variot (*La France Médicale*, 1881, p. 486) reports a marked case of this curious affection. A man of 21 was admitted to the hospital completely aphonic, and so dyspnœic that he was at first thought to be suffering with œdema of the glottis. His face was pale, the lips cyanosed, the respiratory movements frequent (twenty-five to thirty in the minute). The patient was torpid and apathetic, so that a history was difficult to obtain, but it was ascertained that he had had some throat-trouble for two or three weeks, and had lost his voice gradually during the preceding week. For two days he had suffered intense oppression. He had no cough, but occasionally spat a little blood.

Physical examination showed the patient of good figure and weight. The chest gave a sonorous percussion-note. Auscultation revealed sonorous râles over the upper portion of the lungs, with more confluent subcrepitant râles over the base of the left side. These signs, however, were not at all in proportion to the subasphyxiated condition of the patient. Auscultation also showed that the difficulty in respiration did not result from any laryngeal obstacle, for the vesicular murmur was perceptible from summit to base on both sides. The cardiac movement was tumultuous; there was no abnormal murmur; the pulse beat 130, and was small; temperature, 98.6° Fahr. Examination of the urine showed absence of albumen and sugar. Laryngoscopic examination showed

slight inflammation of the vocal cords, with some anæsthesia, accounting for the aphonia; the cause of the dyspnœa, however, remained obscure.

Uræmic dyspnœa was suspected, but the complete absence of albumen from the urine and of lowering of temperature pointed away from this diagnosis. The prognosis, however, was evidently grave. In fact, the patient sank rapidly; the respiration became more and more embarrassed. The evening after his admission the patient lost consciousness; the respirations became slower (seven to eight per minute), with long intervals. He died towards morning.

The autopsy showed both kidneys sclerosed, small, granular, and pale. The capsule was extremely adherent; there were no cysts. The cortical substance was reduced to a thickness of one and a half millimetres. The histological examination showed the well-known signs of interstitial nephritis; the tubules had, for the most part, disappeared in the cortical substance, and the sclerosed glomeruli were piled one above the other. The arteries were affected by endarteriïtis; some were calcified. The right heart was hypertrophied. The lungs were adherent with some little tubercular deposit, with a few caseous foci. All the bronchi were extremely congested and almost filled with reddish serous fluid of a frothy character. The vocal cords were congested, but did not explain the dyspnœa; they were not ulcerated. The urine examined after death gave a specific gravity of 1014°.

Secondary Syphilitic Laryngitis.—A recent number of the *Centralblatt für Chirurgie* (1881, p. 214) reviews a recent monograph by Gouguenheim, giving the following points of interest. Gouguenheim considers these affections very common. He has met with one hundred and nine cases in two hundred and seventy-five syphilitic individuals,—two-fifths of all cases. The trouble usually begins in the first six months of syphilis. Total and partial laryngeal affections are observed. General laryngitis is often found in connection with hyperplasiæ, which then attack the epiglottis in particular; more rarely the arytenoid region and the true vocal cords; most rarely the false vocal cords. Partial laryngitis shows the same frequency. Mucous patches, the occurrence of which within the larynx has been denied by authors, have frequently been observed, chiefly upon the epiglottis. Usually, in addition to the laryngeal syphilis, mucous patches are found in the mouth and throat, and on the vulva and anus; rarely skin-troubles alone. Patients in Gouguenheim's experience are young,—between eighteen and twenty-five. In advanced forms of syphilis a general hyperplasia is sometimes met with as an intermediate symptom between the secondary and tertiary laryngeal syphilis, which sometimes may assume very considerable dimensions. In earlier stages ulcerative erosions are frequently found, and these are seated on infiltrated surfaces or more rarely on circumscribed papules. Their usual locality is upon the epiglottis, especially upon its free border. On account of the elevation of the papule on which these erosions are situated, they often seem more deeply excavated than in reality they are. The true vocal cords are reddened, frequently cylindrically swollen, and maculated on the surface. Occasionally pin-head-sized whitish bodies are seen, which are supposed to be mucous patches. Now and then ulceration of the vocal cords is observed. Disturbance of phonation is very uncommon; and this is probably the reason why the affection is so frequently overlooked. Hoarseness only occurs when the true vocal cords are involved. Deglutition is rarely disturbed. Under appropriate treatment the affection lasts from two to eight weeks, rarely longer. Relapses are common, especially when the treatment is of too short continuance or under bad hygienic circumstances. The prognosis is favorable, provided decided hypertrophy has not taken place. The diagnosis is aided by the simultaneous occurrence of eruptions on the skin and mucous membrane. Treatment should be local and general. Gouguenheim gives bichloride of mercury to the amount of 1/6 to 3/4 grain, or the biniodide to the amount of 1/2 to 1 1/4 grains daily, or he orders inunctions. The latter are useful to the amount of a drachm or more, rubbed in twice daily. Locally, the nitrate of silver stick, or a ten per cent. solution, may be applied, or a four to five per cent. solution to the larynx.

Calculus in the Scrotum—Scrotal Lithotomy.—A. Lippomann (*Cbl. f. Chir.*, 1881, p. 256; from *Wratsch. Wedomosti*) gives the case of a man of 68, who, fifteen years previously, had suffered with gradu-

ally progressive stoppage of urine. His physician at that time performed an operation, removing a calculus weighing about four ounces. The wound made by the operation healed slowly and not completely, so that a fistula remained in front of the scrotum, at the root of the penis. The patient urinated through this instead of the urethra, and was obliged to use a small catheter to prevent excoriation. There was no incontinence. For some years the patient continued to feel well, but gradually urination through the fistula became more and more difficult, the scrotum became hard and increased in size, and he was finally obliged to seek the hospital.

On examination, Lippomann found the urethra impermeable to instruments, an obstacle being found in front of the symphysis pubis. The scrotum was enlarged to the size of an infant's head, and filled with a hard body. The testicles were pressed up against the inguinal rings, and could be made out only with difficulty, on account of their atrophic condition. Pus issued from the fistula, and a catheter introduced into it touched a calculus.

The patient was operated upon as follows. An incision having been made along the raphé down to the calculus, the latter was found to be made up of a number of pieces. Four separate portions were removed, weighing about ten drachms. The calculus was phosphatic, with mammillated surface, and of a grayish-yellow color; the various pieces showed facets at their point of juncture. The entire mass was about the size of a goose-egg. The operation, which was performed without anæsthetic, was well borne by the patient; the cavity was washed out with a two-per-cent. carbolic acid solution, the wound sewed up with carbolized silk, and a drainage-tube inserted. The patient made a rapid and good recovery. The fistula alone remaining unhealed served for voiding the urine, which was passed in a squatting position. The patient left the hospital in a greatly improved general condition.

Syphilis in Various Countries.—Rey (*Annales de Dermatologie et de Syphiligraphie*, 1880, p. 662) regards syphilis as at present an essentially universal disease. Two countries only in the known world are exempt,—Iceland and the interior of Africa. In Iceland the physicians say that though frequently introduced it never gains a foothold. That this is not due to climate is shown by the fact that syphilis is rife in such countries as Siberia and Greenland. According to Livingstone, the unmixed tribes of Central Africa do not have the disease, while it prevails among the mixed races. Those nations, says Rey, suffer most where syphilis is introduced for the first time, the cases being of a graver character. The symptomatology of the disease is everywhere the same, except that, of course, the color of the skin has some influence on the character of the skin-lesions. Climate is, on the whole, without essential influence. Authors are curiously at variance on this point,—some considering hot climates favorable to the course of the disease, while others take an opposite view. Facts are wanting. It seems certain, however, that hot climates are bad for Europeans who may have already contracted syphilis. In China the disease seems to run a peculiarly stubborn course. In Rey's opinion, this probably is the result of improper treatment. In high altitudes syphilis runs an unfavorable course. Warm climates appear to favor the rapid effect of treatment.

Echinococcus of the Mammary Gland.—E. Fischer (*Cbl. f. Chir.*, 1881, p. 272; from *Deutsche Zeitschrift f. Chir.*) adds another to the eighteen cases of this affection already on record. A woman 17 years of age observed a chestnut-sized growth in the right breast, which preserved the same size for three years, then beginning to grow and giving rise to pain shooting into the axilla, shoulder, and down the arm. When examined, a tumor the size of an apple was found in the breast, four or five centimetres from the nipple. Removed by an incision practised in the upper part of the breast, some fifty scolices were discovered.

After the operation, a tumor the size of a couple of hazel-nuts was found in the subcutaneous connective tissue just to the rear of the posterior axillary line, which it was found had appeared about the same time as the tumor in the breast, and had rapidly attained the size of a pigeon's egg, later becoming somewhat shrunken,—probably containing a dead echinococcus.

It is worthy of remark that the patient had experienced, some months before the development of the tumors, some pain and discomfort in the stomach, with vomiting. The termination of the wanderings

of the echinococcus probably coincided with the occurrence of these symptoms.

SUPPURATING PHLEGMON OF THE RIGHT ILIAC REGION—THROMBOSIS OF THE VENA CAVA—MORTAL EMBOLUS OF THE RIGHT CARDIAC CAVITY.—Rendu (*Cbl. f. Chir.*, 1881, p. 207; from a French source) gives the case of a patient who showed symptoms of an inflammatory affection of the right iliac fossa. It could not be ascertained whether this was due to an affection of the psoas or of the subperitoneal connective tissue. Disease of the vertebræ could be excluded. After incision and drainage of the phlegmon, improvement took place, which, however, after three days, was followed by marked febrile symptoms, vomiting, dyspnœa, violent cardiac action, and death. The autopsy showed the absence of peritonitis, and the presence of numerous recent and altered clots in the vena cava inferior, without anything else abnormal being found in the vessel itself or in its branches. Clots were found to have been carried from the vena cava to the right heart, so that the latter was quite filled with them. No emboli were found in the pulmonary arteries. How the vena cava became filled with clots could not be found out.

COMPLICATIONS OF ERYSIPELAS (*Giornale di Medicina Militare*, November, 1880; from *Gaz. Med. Ital.-Lombard.*, No. 39, October, 1880).—Dr. Carrier made the following observations during an epidemic which occurred in 1877 in the Hospital St. Eloi:

Quinsy often precedes the attack, and accompanies it throughout.

Manifestations of the erysipelatous inflammation are quite frequent in the pharynx and in the bronchial tubes, but rare in the larynx.

Pneumonia and affections of the pleura have been observed.

Pericarditis and endocarditis are not frequent,—of the two the former occurring the oftener. Myocarditis is very rare.

The writer, from these facts, draws the conclusion that erysipelas is an infectious, constitutional disease, whose action may extend to the internal organs. By preference it attacks the respiratory organs, but it may exert its influence over the central organ of circulation as well. W.

PERMANENT DRESSINGS.—Dr. G. Neuber (*Cbl. f. Chir.*, 1881, p. 216; from *Archiv f. Klin. Chir.*), as the result of observations made under Esmarch at the surgical clinic of Kiel, gives the following aphorisms as a rule for the prevention of secreting wounds. 1. Close stitching of the wound; neither drainage nor openings in the skin in small superficial and smooth wounds. 2. Openings in the skin in large wounds of the soft parts, such as are situated for the most part immediately under the skin and are likely to heal by first intention within ten days. 3. Absorbable drains and simultaneous canalization in wounds which are not likely to be healed for some weeks, or which are situated deep down among the tissues or within some cavity. 4. Gum drains and simultaneous absorbable drains and canalization in wounds which from the beginning tend to heal aseptically but with suppuration.

MELŒNA IN A NEW-BORN INFANT.—Dr. Diéterlin (*La France Méd.*, 1881, p. 513) delivered a healthy woman of an infant apparently in good condition, who passed normal meconium during the first twenty-four hours, but began to pass clotted blood at stool forty-eight hours after birth. The infant weighed three thousand two hundred and twenty grammes at birth, but lost two hundred and eighty-five grammes within four days, during most of which time he nursed well, but passed blood by stool constantly. On the fourth day death supervened. The organs were found anæmic, the intestine red and congested and filled with blood. There were no ulcers or erosions. There was no history of hæmophilia, and the cause of the hemorrhage remained obscure.

POLYPUS OF THE DUCTUS CHOLEDOCHUS —ICTERUS.—Pozzi (*Cbl. f. Chir.*, 1881, p. 224; from *Gaz. Med. Ital.-Lombard.*) gives the case of a man of 40, whose liver was enlarged, and who showed icterus, with cerebral symptoms, dizziness, attacks of hallucination, and marked loss of flesh. After three months' sickness, the patient suddenly one day passed a large quantity of bile at stool, together with a polypus the size of a hazel-nut, the probable cause of the trouble, as no bile had passed at any previous time. The patient recovered rapidly.

FREEING BENZINE FROM OFFENSIVE ODOR.—According to Mr. Fairthorne, benzine may be freed from all offensive odor by shaking it up well with quicklime,—about three ounces to the gallon.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JULY 2, 1881.

EDITORIAL.

WHAT WILL THE END BE?

IT would be interesting to know how many pages are added annually to the medical literature of the world. It is plain, however, that the *cacoethes scribendi* which affects so many medical men is a godsend to publishers and printers, enabling the former to revel in their palaces of stone and the latter to enjoy life in a more simple and yet perhaps no less happy manner. A few of those who furnish the "printer's devil" with medical copy get paid for their labor, but the great bulk of this in the aggregate gigantic mass of toil is either paid for not at all or with such a pittance as not to be worth naming. Nevertheless, the avalanche grows constantly. In this country alone the yearly output is by tons. Using the "Index Medicus" as a guide, we find that in the world last year eleven thousand seven hundred doctors thought they had something new to say, or some new way of saying something old. Mostly were they moved by vanity; and surely the outcome is vexation of spirit.

What the end of all this is to be is not easy to perceive. In fifty years more, if things go on, our unfortunate descendants may witness twenty thousand doctors, with vehement haste, yearly urging their pens in eager rivalry for fortune.

TREATMENT OF GOITRE BY CHLORIDE OF AMMONIUM.—Dr. Stevens has treated seven cases of goitre successfully by means of chloride of ammonium, in the dose of three grains thrice daily. Six young girls and a married woman of forty comprised the patients, and the duration of treatment was two or three months.

LEADING ARTICLES.

TENDON REFLEX.

THE curious phenomena classed under the name of "tendon reflex" have been known for a decade to physiologists and to those interested in the study of nervous diseases, but it is only within the last five or six years that their importance in the diagnosis of certain disorders has been appreciated and their general relationships with other nervous symptoms closely examined into.

An interesting review of the subject by Dr. Ollive, in the *Revue de Médecine*, considers the clinical history of the symptoms, the physiological explanation of them at present accepted, and their semeiotic value.

The so-called clonus or trembling of the foot, which is simply a sudden and rapid muscular contraction, is obtained by rapid flexure of the member, the leg being flexed or even moderately extended. The "knee phenomenon" is obtained when the patient is seated on the edge of the bed with his legs crossed and the one to be examined flexed over the other with the muscles in a state of relaxation. If then, with the edge of the hand or with a percussion-hammer, a smart tap is given to the rotular tendon just above its insertion into the tibia, the leg is observed to be suddenly raised and to fall again with each blow of the hammer, giving rise to a number of oscillations. Clonic contractions may also be produced in the knee as well as the foot by supporting the limb and percussing the ligament a number of times in succession or pressing firmly on the patella. Similar phenomena may be produced in various other tendons in different parts of the body. According to Strumpell, percussion of ligaments, of aponeuroses, and of bones likewise determines reflex contractile movements in the muscles,—an argument employed by those who deny that tendon reflex is of spinal origin.

The French theory of the origin of tendon reflex is that it is essentially spinal. The skin is not the point of departure of this reflex, for, on the one hand, it cannot be excited by irritation or blows upon the skin, and, on the other hand, if the skin is completely anæsthetized the tendon reflex can nevertheless be excited. Sachs

has shown that reflex movements can be aroused by excitation of the muscles or muscular branches of nerves. No terminal nerve-fibres are found, however, in the striated muscular fasciculi except motor fibres, the non-medullated nerve-fibres terminating in aponeuroses, with which alone muscular sensibility is connected. The excitation is produced at this point, the tendon only serving as an elastic medium for the transmission of vibrations which impinge upon the minute terminations of the aponeurosis. It is for this reason that the tendon should be in a condition of partial tension.

The investigations of Schultz and Furbringer, and also those of Tschiriew, have demonstrated that the "knee phenomenon" cannot be produced after section of the corresponding crural nerve, and that therefore the muscular succussion is not produced by direct mechanical excitation of the muscular fasciculi without the intermediation of the nerves. Not only does section of the crural nerve put an end to the "knee phenomenon," but section of the posterior roots of the sixth lumbar pair (in the rabbit), as also section of the cord between the fifth and sixth lumbar vertebræ, has the same effect. The reflex of the knee has its origin in a limited portion of the spinal cord,—namely, that from which the crural nerves take their origin. It may be perceived, therefore, that the muscles are in communication with the spinal cord by a nervous circle. This system is entirely distinct from the cutaneous nervous circle.

An important point in the study of tendon reflex is the measurement of the time required for the transmission of the impression; and this has been found by Brissaud to average fifty *millièmes* of a second.

Thus far we have considered the physiology of the "knee phenomenon" alone; but we must say a few words regarding the "foot phenomenon," which also merits attention. Considered for a long time as a reflex act produced under the influence of pathological irritability of the cord, since it does not exist in the normal condition, the "foot phenomenon" is explained by Charcot to consist in "violent alternative contractions of the flexors and extensors, and, under some circumstances, of the abductors and adductors." Why is not this epileptoid trepidation, like the "knee phenomenon," a normal incident? and why is it not produced except in those cases where the muscles are contracted? The tendinous nerves of the triceps cruralis, excited by percussion or by stretching the tendo Achillis, can, by reflex action, cause the muscles of the posterior portion of the leg to contract. The foot being extended, the tendons of the anterior portion of the leg are put on the stretch, and become, in their turn, the point of departure for the tendon reflex. Thus a true vicious circle is established, and artificial trepidation results,—clonus of the foot. This does not occur in the normal condition on account of the mode of insertion of the anterior muscles of the leg. The muscles are put upon the stretch before their tendon, and, in consequence, there does not occur any excitation of the centripetal nerves of the aponeurosis and of the tendon. In pathological conditions, however, exaggeration of muscular tension and contraction intervenes, and the terminal nerve-fibres are excited.

While the French hold the theory of the spinal origin of tendon reflex, the Germans (and Westphal among them) do not attribute tendon reflex to a reflex effect, but to a direct contraction produced by mechanical action on the tendon and muscle. Waller, a pupil of Ferrier, holds the same view. The curious fact, which at first seems to give irrefragable confirmation to the view of spinal origin (namely, that excitation of the tendon of one limb may give rise to reflex muscular contraction in the other), is disposed of by asserting that excessive contraction affects the trunk, giving rise to an apparent contraction of the other side.

The degree of intensity of the tendon reflex is the same as that of the muscular tonus,—a kind of insensible contraction, distinct from true flaccidity,—a condition of the muscle, in fact, where, as Claude Bernard has demonstrated, combustion goes on more vigorously than in the paralyzed muscle. If this muscular tonus is exaggerated, we have contraction, and in this state it is obvious that tendon reflex will be most marked. If the muscular tonus is, on the contrary, diminished, abolition of tendon reflex is observed, as in ataxy. The cord governs this tonus by the intermediation of the nerves of muscular sensibility, and the tonus itself is exaggerated not only in pathological conditions, but also by the action of strychnia.

Charcot has given to this condition the name of *spontaneous strychnism*. From this fact also is deduced the practical conclusion that it is unwise to give strychnia in hemiplegia where muscular contractility is preserved.

Türck and Bouchard have shown that paralysis following an apoplectic stroke becomes incurable only when an equally incurable lesion is developed in the spinal cord. This lesion has been shown to be situated in the antero-lateral column, particularly in the pyramidal fasciculus. The latter, as is known, is composed of all those nervous filaments which, leaving the motor convolutions of the cortex cerebri, are distributed to the various portions of the cord, and are in communication with the cells of the anterior horns. It is in a sort of great commissure established between the cerebral and medullary motor cells; and alterations which affect the motor cells of the convolutions or which suppress their communications with the pyramidal fasciculus are followed by degeneration of the latter, as if these cells played, as Huguenin supposes, the part of trophic centres. It is, in short, one of the principal excitants of the gray substance. Sclerosis of this fasciculus, therefore, must inevitably react on the cells of the anterior cornua, and exercise at that point, first, an irritative action, shown by exaggeration of the reflex and contracture. Later it may give rise to alteration of the cells, leading to paralysis, muscular atrophy, and disappearance of tendon reflex, the latter preceding and demonstrating the atrophy. The curious phenomenon of "arrest"—that is, where epileptoid spasms are controlled by movements similar to those causing the foot phenomenon above described—belongs under this head, but we cannot do more than mention it.

The foregoing remarks, necessarily somewhat extended, because the subject itself is somewhat obscure and not generally understood, except by special students of nervous diseases, may be summed up in the following definition of tendon reflex given by Charcot:

"*The tendon phenomena are the result of reflex action; they originate in the centripetal aponeurotic nerves situated between the muscle and the tendon,—nerves which pass with the posterior roots to the æsthesodic* nerves of the cord, which are themselves in connection with the motor cells of the anterior cornua; the reflex arc is completed by the motor cells and by the motor nerves which emanate therefrom. The arc of the tendon reflex is not the same as the arc of the musculo-cutaneous reflex.*"

Having thus set forth the character and physiological nature of the tendon-reflex phenomena, we shall at a future time indicate the semeiological value of the symptom, the importance of which in the diagnosis of certain nervous diseases cannot be exaggerated.

* Æsthesodic nerves are those having the faculty of conveying sensation.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held at the hall of the College of Physicians, Philadelphia, March 9, Dr. Albert H. Smith, President of the Society, in the chair. Dr. Little read a paper upon reflex affections of the eye. (See No. 354, p. 581.)

DISCUSSION UPON REFLEX EYE-DISORDERS.

Dr. S. D. Risley said that cases of eye disease due to conditions of general ill health frequently occur in the practice of the ophthalmic surgeon, but he believed it was rarely necessary to resort to the theory that they were reflex in their origin. In cases of hyperæsthesia of the retina, or of retino-choroidal irritation, it was his habit to exclude as a possible cause any existing refraction error by careful correction, and, if relief did not follow, refer the patient elsewhere for treatment of any existing trouble with other organs. He could cite a number of cases with eye-symptoms accompanying stomach-trouble, uterine disease, and other disorders, which did not do well until these other conditions were properly treated. They were not, however, regarded as sympathetic or reflex in origin. Given a case of hypermetropia, or other error of refraction, of low degree, and the patient may remain in ignorance of its presence until the general tone of the system is lowered by some depressing influence,—it may be by uterine disease, a miscarriage, or one of the exanthemata.

As long as the patient was well and strong, the eye-strain was endured without a murmur, but under the depressed tone of the system the eyes not only became painful, but the subject of pathological changes, if not relieved.

He thought hyperæsthesia of the retina very rarely present without definite pathological ocular change to account for it. He could recall but one case occurring in his experience,—a young woman with a family history of nervous derangements and mental

disturbance. She had been under the care of a prominent practitioner for loss of voice, for which he could discover no cause. She was sent to consult a gynæcologist, who pronounced the uterus healthy. A new direction, however, had been given to her thoughts. The voice was rapidly restored, and she became the victim of backache and various other symptoms of uterine disease, for which she was placed under the care of a female physician, who for several months treated the uterus locally.

Some of her associates about this time were under Dr. Risley's care for eye-trouble. In a few weeks she was brought, suffering from the most agonizing photophobia. The eyes were, externally, normal, $V = \frac{20}{XX}$ and eye-ground healthy, and were proved to be emmetropic under atropia. No improvement followed any treatment devised: so she was sent to the sea-side, with the remark in her presence that if there was not decided improvement in a week she was to return, and leeches would be applied to the temples.

She returned at the end of a week, entirely well.

When the general muscular vigor is below par from any cause, the muscles of accommodation and convergence do not escape the general weakness. This is frequently witnessed after wasting diseases. Nothing is more common than to hear the asthenopic patient date the beginning of his eye-trouble back to an attack of typhoid fever, or some other disease from which he had suffered. The weak eyes of ladies recently confined, he thought, were to be placed in the same category. Hypermetropic children not infrequently have strabismus for the first time during convalescence from measles or scarlet fever, and, as every one knows, this is the favorite time for an onset of phlyctenular disease. It would be unwise to treat these cases by local measures only. He believed, then, that, given a case of depressed health from uterine or other disease, the liability to eye-disease is greater than in health, and that this liability is greatly enhanced by the presence of some error of refraction, but that resort to a theory of reflex action is but rarely necessary.

Dr. Charles S. Turnbull remarked a difference between the eye-symptoms of pregnancy and those occurring in the condition discussed in the paper. His attention had been called to the latter when he was with Dr. Knapp. His experience was that the eye-symptoms in anæmic women are less frequent than in strong, robust women. So much was this the case that Dr. Knapp considered it to be a common defect in American girls, and occurring more frequently in the office practice among the better class of patients than among the poor. He (Dr. Turnbull) would not be willing to discuss them simply under the head of asthenopia, but as coming more directly under local anæmia or hyperæmia, and would then ascertain the condition of the uterus. The term ischæmia retinæ, or a sluggish condition of the retinal circulation, he preferred to either anæmia or congestion, as being more applicable. A cure is most often obtained where menstruation has been deficient or entirely suspended, owing to the symptoms being produced by rush of blood to the head (vicarious).

In cases of strabismus he would not blame the internal recti muscles alone, as stated by the preceding speaker, because myopia is not generally associated with it; he would rather in such cases blame the external recti, because hyperopia is the most common error of refraction accompanying such cases. In some cases hyperæsthesia of the retina is due to the lazy, inactive life so frequently pursued by young girls. He had never seen a case of undoubted hysterical asthenopia, but he had seen numerous simulated errors of refraction in cases where there was also functional disorder of the uterus.

Dr. John B. Roberts was interested from the fact that he had seen a number of cases in which the condition of the uterus had some connection with the eye disease. Eye-symptoms may in like manner be caused by defective teeth. He had seen patients suffering very great inconvenience from asthenopic symptoms without the slightest degree of error of refraction existing: hence the asthenopia was either muscular or retinal, and seemed connected with uterine disorder. He had also seen cases of evident eye-disorder in which, after the adjustment of spectacles, the expected relief was not obtained: it was then discovered that there was some uterine derangement. He did not believe that the influence was reflex, but it was connected with the general depression of health which might accompany any ailment. In one case, a healthy, robust woman, no asthenopic trouble was experienced until her first pregnancy: she got quite well, but the eye-symptoms returned with the next pregnancy. He had even seen corneal ulceration in connection with prolonged nursing of a child as a result of malnutrition.

These cases are very interesting, as they bear directly upon the question of treatment, which should be less special than general.

Dr. Little, in concluding the discussion, said that he had not claimed originality in his views, but merely reported a few cases to stimulate observation. In his second case he had tried electricity without lasting result. The eye-defects were thoroughly corrected, but even under the effects of atropia the blepharo-spasm continued, showing a reflex source of irritation outside of the eye; for if they had been in the eye the correction of the refraction and the instillation of atropia would have relieved the troubles. The third

case was handed over from the gynæcologist, and the eyes were treated afterwards. The first two cases were fully corrected before being passed over for uterine treatment.

The rule is in cases of eye-symptoms to correct any errors of refraction, and also to correct uterine trouble, kidney-trouble, or other source of disorder in the system. In cases of pregnancy the eye-disorder might be due to uræmia or Bright's disease; but these do not come within the scope of the paper.

March 23, 1881.

DISCUSSION UPON DIGITALIS.

Dr. H. C. Wood, in opening the discussion, referred to the current views in regard to the action of digitalis upon the nervous apparatus of the heart, and claimed for it a peculiar effect upon the heart-muscle. This influence, which had been fully demonstrated by physiological experiment and sustained by clinical observation, renders digitalis particularly serviceable in the condition of heart disease in which the increased work required of the heart is greater than the increase of the power, without regard to the particular valve which may be affected. It improves the nutrition of the heart by regulating its contractions and lengthening the diastolic interval, doing away with the rapid, imperfect contractions which interfere with the blood-supply of the cardiac muscle. In such cases the nutrition of the heart suffers because it is necessary to have lateral distention of the aorta in order to fill the arteries in the muscular tissue. A little digitalis steadies the heart, and therefore improves its condition and retards degeneration.

In chronic valve-trouble of the heart, digitalis is serviceable, and sometimes must be given in large doses. A half-drachm dose of the tincture apparently saved from impending death two cases of advanced heart-trouble coming under the speaker's observation: they afterwards got well enough to attend to their business. It enables the heart to gather up its strength, and keeps it going until the last. By the surgeon, digitalis is often used improperly. Thus, it is not rarely given in aneurism, where the great danger is from increased lateral pressure, not want of forward pressure. In one case coming under his observation digitalis caused the rupture of an internal aneurism at the hospital. The patient had been brought in without any diagnosis, and no one had suspected aneurism.

In acute diseases with failing heart, digitalis may be employed: such a condition may occur in asthenic or in the advanced stages of sthenic pneumonia. In the early stage of sthenic pneumonia it is improper to give it. Such a medicine as veratrum viride, which produces vaso-motor paralysis, is indicated, so "as to bleed a man into his own tumors." Blood is drawn to the lungs because there is there a local vaso-motor palsy: produce a general vaso-motor palsy, and the local attraction ceases. When the lung is consolidated throughout a large extent, the heart is overworked; by and by it begins to fail, the pulse gets rapid and feeble: now digitalis comes into play. It will save life in such a condition, when the patient without it must die. Take the case of a drinking man, seen a few days since, suffering with pneumonia, pulse 150 to 160, respirations 60 to the minute, delirium persisting for two or three weeks, expectoration of pure blood, &c. This man was given ten minims of tincture of digitalis every two hours, day and night, until the pulse fell to 60,—when the digitalis was stopped, and resumed as the pulse went up. By the aid of milk and whisky the patient was saved.

Two points in conclusion: (1) in regard to the cumulative action, (2) in regard to the cause of the slow action, of digitalis. The remedy acts slowly in producing its full effect, and its effects are very permanent when they do appear. Some agents act more quickly than others: digitalis acts slowly and cumulatively, not only because of its special influence upon the heart, but because it only comes very slowly in contact with the heart-structure, since it osmoses slowly into and out from the body. Where it fails to act upon the kidneys, it is more apt to act cumulatively upon the heart. The practical point is this: watch the kidneys when giving large doses of digitalis: if water is not passed freely, then cumulative action will be apt to occur. In a case of chronic pleurisy Dr. Wood tried to run off the water by the kidneys; the pulse ran down steadily from 70 to 40 in four days after the medicine had been withdrawn; it was a long time before the effect of the digitalis was manifested, and it was long before it ceased to act. In the pneumonia case, after the pulse began to drop, it was eighteen or twenty hours before it again reached the normal. The longer the digitalis is in acting, the more likely it is to have a lasting effect. After abdominal tapping, the digitalis often shows itself in reducing the heart's action. Either the digitalis has been lying in the intestines unabsorbed or in the cellular tissue: probably all the fluids are saturated with the drug.

Digitalis is a very useful remedy in cases of syncope and collapse. Formerly alcohol alone was used. One of the advances of modern therapeutics was to teach the danger of giving large doses of alcohol in cases of surgical shock. Belladonna and digitalis are proper remedies, given by the hypodermic injection. The pulse begins to fill up in twenty minutes or half an hour. No irritation is produced at the point of puncture. Throw in twenty minims of the tincture at once, and expect to find the result in half an hour.

He did not wish his remarks to be understood as declaring that digitalis was entirely without danger, but he had used it in hundreds of cases, and had seen men apparently dying revive under its effects. It is important to stop it as soon as evidence appears in the pulse that it is beginning to be absorbed. Used in this way, he did not believe that there would ever be any serious cases of poisoning with it.

Dr. E. T. Bruen could not agree with the speaker in condemning stimulants in shock: he had seen cases brought back to life by their aid when apparently dying of cardiac failure. Digitalis should be given in small doses in valvular disease, on account of the disturbance of digestion caused by large doses, and because he had seen brilliant results from small doses for months after he had utterly failed with large doses. As regards the danger, it can be guarded against by watching the pulse. He tells patients to stop the remedy when the pulse gets down to 60.

Dr. O'Hara endorsed the speaker's remarks in regard to the value of large doses. He prefers the infusion. He had observed that in some cases, however, the drug seemed to exert no influence at all.

Dr. J. T. Eskridge considered digitalis particularly serviceable in nervous heart and weak heart, and reported several cases. He also approved of its use in shock and collapse. He gives the infusion generally, but gives the tincture when he wishes to keep up the effect for a long time. He had never seen any cumulative action upon the heart.

Dr. Toboldt pointed out that there is a great difference in the infusion as obtained from different druggists. He had found that it is made by some simply by adding water to the fluid extract or tincture.

Dr. Benjamin Lee inquired as to the value of digitalin.

Dr. William B. Atkinson uses digitalis in full doses in scarlet fever, always having the infusion made under his own supervision from the leaves. He had seen cumulative action twice.

Dr. H. Leaman reported a case of a laboring-man with advanced heart-disease, with cartilaginous valves. As soon as he put him upon the digitalis he was able to go to his work, and he continued to perform manual labor without trouble or palpitation, from which he formerly suffered, although the medicine was not kept up.

Dr. W. R. D. Blackwood said that he had used it very largely in delirium tremens. He considered it important to watch the kidneys, especially where using large doses. In old topers he had given half-ounce doses of the tincture, and in one case he had used this dose for eight repetitions an hour apart. He believed that this patient had been kept alive for six years by digitalis.

Dr. L. Turnbull inquired in regard to the tonic effect of digitalis. Some authorities believe that it is not the weak heart that is acted upon, but the nervous apparatus: consequently the irritable and irregular heart would be more likely to be favorably influenced.

Dr. Wood, in closing the discussion, said that he would refer to but two or three practical points that had been touched upon. First, in regard to the choice of preparations: the general preference appears to be for the infusion. He believed that the only reason that the infusion was preferred as being more efficient is because it is usually given in relatively larger doses than the tincture. He would mention, in passing, that the infusion as well as the tincture obtained from an unknown druggist is not rarely an unreliable preparation. He had seen very few cases where the stomach-disturbance was considerable, and believed gastric disturbance was less apt to occur when the tincture was given than with the infusion. With regard to digitalin, he had not made much use of it: it is not the alkaloid, but merely a purified extract, and comprises at least two principles,—the one soluble in water, the other insoluble. It is uncertain in its composition and in its results. As the dose of digitalis is so small, it is not necessary to resort to this substance, with which you might get results or you might not.

He wished to be distinctly understood as discountenancing the use of large doses of digitalis until the small ones have failed: he would never use powerful remedies when milder ones will do. With regard to Dr. Leaman's case, the heart had apparently been starved, and the use of digitalis had flushed it with fresh blood and gave it a new stock of nutrition. In such a case he would advise continuing the remedy, giving small doses from time to time, in order to continue the effect. The action of digitalis upon the frog's heart is that it is rarely arrested in diastole, more frequently in systole. As regards the question of its effect upon the pneumogastric nerve, in some cases the effect is to destroy life in this manner. In such cases we can restore the action of the heart by cutting the pneumogastric nerve. As a rule, however, the effect is greater upon the heart than it is upon the nerve, and the animal dies of cardiac spasm. It has the same effect upon the pulse of mammals; its full effect produces a weak pulse, sometimes dicrotic: this he had seen beautifully illustrated in man. It means that there are two antagonistic effects upon the heart,—upon the heart-muscle and upon the brake-action: this is undoubtedly the explanation of the dicrotic pulse and of the double wave written upon the manometer. Later the arterial pressure is found to be falling; looking at the heart, the dilatation becomes less, the diastole becomes imperfect, only a small amount of blood now enters its

cavities, on account of the cramp of the muscular tissue, just as in the tetanic spasm or the muscles of strychnia-poisoning; then comes cramp of the muscles of respiration, and death. The pulse becomes frequent in digitalis-poisoning, because the heart is so constricted that the blood is dammed back and cannot get into the aorta.

A vote of thanks was, on motion, tendered Dr. Wood for his able remarks.

April 13, 1881.

SPECIMEN OF FALSE MEMBRANE FROM THE INTESTINAL CANAL. Presented by Dr. W. R. D. Blackwood, for Dr. B. Lee.

The patient is a married woman, about 45 years old, of nervous temperament, spare habit, rather anæmic, with a frequent and feeble pulse. Has partial anchylosis of the left hip-joint, and has suffered a rupture of one of the peroneal tendons of the same leg, from which she has been compelled for a year past to walk with a cane. Has suffered more or less from malaria at the West. Appetite and digestion good. About the middle of January last she had an obstinate attack of inflammatory diarrhœa, for which I treated her with minute doses of Dover's powder and calomel, followed by small doses of castor oil frequently repeated. It subsequently appeared that this attack was due to sewer-gas in her bedroom, which accounted for its persistence. One week since, she began to be sensible of a disagreeable feeling of abdominal distention, accompanied by soreness in the abdomen on motion, but not on pressure. This gradually increased for three days, and at the same time a general sense of nervous uneasiness, compelling her to keep in motion, developed itself. Finally, after an attack of severe "tearing" pain in the situation of the transverse and descending colon, she had an evacuation consisting principally of shreds of membrane like those which I present. These evacuations have continued at the rate of two or three a day, sometimes with and sometimes unaccompanied by fecal matter. There is no diarrhœa, and little if any febrile movement. No headache or nausea. The intense pain before the evacuation is relieved by the discharge of the offending material. This attack is not the first of its kind. She has had similar ones occasionally for three or four years, the general symptoms being such as characterize the present. The membrane has usually been discharged in strips about six inches long and half an inch or more in width, but the first which she ever passed was tubular and of considerable diameter. They appear to me to be extremely tough and coherent, and to be composed of distinct layers, so much so as to suggest a suspicion of their origin. They have been macerated in water and subjected to several washings since yesterday (Tuesday) morning, when they were extruded, which has of course diminished their tenacity. I would suggest the propriety of their being subjected to microscopic examination.

The specimens were referred for examination to the Committee on Microscopy.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, MARCH 10, 1881.

The PRESIDENT, DR. S. W. GROSS, in the chair.

Hypertrophy of nymphæ. Exhibited by Dr. B. F. BAER. (Permission having been on motion accorded him, Dr. Baer's paper will appear in the *Obstetrical Journal.*)

DR. FORMAD said that he had made a microscopical examination of a section of the specimen presented by Dr. Baer. The surface was covered by the normal cuticle of a mucous membrane somewhat hypertrophied, owing to exposure to the air. The rest of the growth consisted of succulent fibrous tissue, so that he would call it a polypoid fibroma.

Dr. S. W. GROSS asked whether Dr. Formad had noticed anything peculiar about the lymph-spaces.

Dr. FORMAD replied that in the single section examined by him nothing unusual was noted with regard to these cavities.

Case of alveolar sarcoma of the femur. Exhibited by Dr. C. B. NANCREDE.

The specimen was removed by exarticulation at the hip-joint, in January, 1881, from a man aged 35 years. The duration of the case is doubtful, but it probably extends over a space of about two years. A little over three months back, spontaneous fracture occurred. The tumor involves the lower half of the femur, the popliteal space, and apparently the tibia. Owing to the unfortunate decomposition of the specimen, nothing definite can be said about the deeper portions of the growth or the condition of the knee-joint. A loud aneurismal bruit was heard over all portions of the growth, which was of variable density. In the fresh state, upon dissection, the growth was strictly limited in front and laterally by the fibrous expansions of the quadriceps, but the posterior muscles were involved near their attachments. Section of some of the nodules revealed a growth which closely resembled normal brain-substance in consistence, etc. Microscopic sections were obtained from portions removed within twenty-four hours of the amputation, but, as before said, the actual involvement of the tibia or knee-joint could not be determined, owing to decomposition having taken place. The patient did well for a few days, but died finally on the eleventh day after operation. He wor-

ried and fretted so lest something *might* go wrong, that although the wound was well united, except at portions of its edges, a few drainage-openings, and its deepest parts, he actually seemed to die on account of his dread of death, which reduced his vitality to such a low ebb as to render him a ready victim to blood-poisoning, to which, although shown in no definite form, he seemed finally to succumb.

Osteo-sarcoma of knee-joint. Exhibited by Dr. H. F. FORMAD, for Dr. C. A. MCCALL.

Mrs. R., 30 years of age, has four children, had two miscarriages, and one set of twins at full time. Weighed while in health about one hundred and fifty pounds. Never had had a day's sickness previous to this lesion; not a trace of any hereditary or specific disease in her family.

Mrs. R. during the Centennial year experienced, for the first, pain upon protracted exercise, in the right knee. A few months thereafter the leg would become suddenly flexed without apparent cause, thereby occasioning frequent falls, one of which, while stepping out of a carriage, resulted in a violent blow upon the right knee against the edge of the curb-stone. Synovial inflammation at once set in, with all the usual symptoms,—pain, swelling, enlargement, fluctuation, etc. This condition becoming chronic, anchylosis to a considerable degree was established. In the latter part of 1877, Prof. Agnew broke up the adhesions and the leg was placed in Stromeyer's apparatus; this was borne but indifferently well, and before another six months the distortion was reproduced. At this time the swelling of the joint began to be more marked; pain was excruciating and intermittent; the patient's health began to give way; she became thin and anæmic, and, though not strictly confined to her bed, showed all the symptoms of general "break-up." The case then left my hands, but came again under my care one year ago, when I found the leg in much the same condition as now presented in the specimen. Her general condition of health was bad, and in addition she was pregnant. A delay of nearly a year for any surgical interference was thus forced upon me.

November 27, after the puerperal state had fully passed, and the patient being in good condition of nutrition, amputation was resorted to, and performed at the upper third of the thigh. She stood the operation well. The stump healed, and she is regaining apparent health.

At the time of the operation the tumor had reached the size of an adult's head. The skin was freely movable over the tumor, and no discoloration or ulceration was present. The lymphatic glands were not involved. The tumor was of white color, soft in consistence, contained numerous fragments of bone in its parenchyma, but was not enveloped in a bony capsule. The lower portion of the femur and parts of the tibia and fibula, as well as the patella, were involved in the new growth.

Microscopic examination revealed the typical structure of *alveolar sarcoma*, strongly intermingled, however, with the spindle-celled variety of sarcoma.

Dr. FORMAD said that, in addition to the information given in the notes, he would say that the patient had done well since the operation, having gained in flesh and strength. He thought that both Dr. Nancrede's case and his own were remarkable in this combination of round and spindle cells, which is certainly uncommon in such a situation, constituting the rare form of alveolar sarcoma.

Dr. GROSS called attention to the rarity of alveolar sarcoma, and said that these two specimens were, he believed, the only ones that had ever been exhibited to this Society. In his lectures before the College of Physicians upon sarcoma of the long bones, he had then only one case of alveolar sarcoma to report, the specimen having been sent him by Dr. Burchard, of New York. He thought that, contrary to Dr. Formad's opinion, the outlook for Dr. McCall's case was very bad, as this form of sarcoma is peculiarly fatal. He would also call attention to the unusual fact that the knee-joint had been invaded and completely destroyed. This was the first instance out of many examined by him where this condition had obtained. Extension of this disease from the tibia to the femur, or *vice versa*, is not uncommon, the morbid growth seeming to travel along the crucial ligaments. There seemed to be numerous portions of the specimen presented by Dr. Formad which were calcified. Dr. Gross would therefore class this tumor as a calcifying alveolar sarcoma.

Vesical calculus. Presented by Dr. C. B. NANCREDE.

C. S., aged 5 years, had been suffering from difficult and painful micturition for about three years at the time when I was asked to see him. Two years previously he had been taken to a hospital in this city, where the hypertrophied condition of his prepuce, instead of exciting suspicion of a vesical calculus, only induced the surgeon on duty to circumcise him. In the latter part of January, 1881, he was admitted to St. Christopher's Hospital under the charge of my friend Dr. Wm. H. Bennett, who, immediately suspecting the nature of his ailment, sounded him and readily detected a stone.

He kindly requested me to operate for him, which I accordingly did on February 9, 1881. No difficulty was experienced in reaching the stone, but it was only after prolonged efforts, consequent upon repeated failures, that, after enlarging the wound in the bladder, I finally extracted this unusually large stone

for so young a child. It measures one inch and a half, less a sixteenth, in the longest diameter, by one inch in width, by five-eighths of an inch in thickness, and weighed two hundred grains.

Vocal apparatus of the alligator.

Dr. C. SEILER said that during his recent stay in Florida he had occasion to examine the vocal apparatus of the alligator. To his surprise, in almost every instance there was more or less ulceration of the epiglottis, etc., in some cases amounting even to the total destruction of this structure. He had discovered that these lesions were due to a small variety of leech abounding in the Florida rivers. In some instances he had detected these creatures *in situ*, and the surfaces left upon their detachment were so exactly similar to those seen in the other supposed specimens of ulceration, that he was compelled to conclude that all were due to the same cause, viz., leech-bites.

THURSDAY EVENING, MARCH 24, 1881.

The PRESIDENT, DR. S. W. GROSS, in the chair.

Specimen of necrosis of radius. Exhibited by Dr. C. B. NANCREDE.

This specimen was removed from a married woman, 35 years of age, who three or four years since had her arm, as she calls it, "badly sprained." Some months after this the swelling and pain increased, suppuration ensued, and numerous sinuses formed. At the time of my examination, before admitting her to my wards in the Protestant Episcopal Hospital, the arm presented the ordinary appearance of necrosis with either fracture of the sequestrum or involucrum, as movement induced crepitus. At the operation it was seen that death of the whole shaft, for an inch or more, had occurred, that the necrosed segment had been nearly absorbed, and that its fracture had been the result of some trivial violence. The special point of interest was that nothing worthy of the name of involucrum had been formed, only a few nodules of osseous material being detectable in the surrounding periosteum. Condensing osteitis was present to a marked degree contiguous to the necrosed and carious bone, rendering its section very difficult. Dr. Nancrede thought that the specimen was of interest from the rarity of the failure of the periosteum, *in chronic cases* of bone-trouble, to form a marked involucrum.

IODOFORM IN GONORRHŒAL ORCHITIS.—Sabadini, in a case where there was enormous swelling and intense pain, applied an ointment of one part of iodoform to four parts of vaseline. The swelling disappeared within a few days, the patient going about as usual all the time.—*Gazette des Hôpitaux; New York Medical Record.*

PHILADELPHIA ACADEMY OF SURGERY.

STATED MEETING OF MARCH 7, 1881.

DR. S. D. GROSS, President, in the Chair.

DISLOCATIONS AT THE WRIST-JOINT.

DR. J. EWING MEARS reported two cases of posterior dislocations at the wrist-joint, occurring in boys aged respectively 17 and 12 years.

Case I.—J. M., colored, æt. 17, came to my office on the night of January 22, 1878, suffering from an injury of the right wrist. At the time of the receipt of the injury he was engaged in turning out the gas-lights in a gymnasium hall, standing for that purpose on a small step-ladder. Losing his balance, he fell from this to the floor, striking on his right side, his right arm being under his body, the wrist-joint bent, and the hand twisted inward. Regaining his feet, he found that he had sustained an injury to the joint. Slight pain was felt in the parts.

On examination, it was found that the movements of the joint were greatly impaired. The hand was slightly flexed, as were also the fingers. On the posterior surface of the forearm, just above the radio-carpal articulation, there was a marked projection, the surfaces of which were rounded and smooth. Anteriorly, there was a corresponding projection, formed by the lower extremities of the radius and ulna, the outlines of which could be distinguished by firm pressure. In the efforts which were made to elicit crepitus, it was found that the projecting surfaces could be separated to a slight extent, and that the continuity of the bones of the forearm could be distinctly traced.

Reduction was easily accomplished by extension and manipulation, and the functions of the joint immediately restored. There was no tendency to a return of the displacement, and careful examination failed to detect crepitus. A bandage was applied and retained in position for three days, for the purpose of affording support to the joint. Since the receipt of the injury the joint has been examined from time to time, and there has been found no evidence of the slightest impairment in its functions. The patient being present this evening, an opportunity is afforded of making an examination three years after the accident.

Case II.—In July, 1878, a boy, æt. 12 years, was brought to St. Mary's Hospital, who had sustained an injury to the right wrist-joint by a fall from a tree. He was greatly alarmed by the accident, and could give no intelligible account of how he alighted upon the ground. He made no complaint of pain on manipulation of the parts, and careful examination could not discover any marks or bruises upon the surfaces of the hand to indicate that he had fallen upon this part. The signs of posterior dislocation were as strongly marked as

in the previous case, and, before efforts at reduction were made, these were all verified by examination. Reduction was effected, and a roller applied as before. In a few days this was removed, and the movements of the joint were found to be unimpaired.

Dr. Packard said that he had met with three cases which he believed to have been luxations of the wrist.

Case I.—A. R. H., æt. 37, was admitted into the Episcopal Hospital, December 4, 1879, having fallen from a scaffold about twelve feet high. He was thought to have a Colles' fracture of the wrist; but there was no crepitus, the reduction was readily accomplished, and one week afterward the functions of the hand were perfect.

Case II.—G. B., æt. 17, came to the Dispensary of the Episcopal Hospital, December 15, 1880, with luxation inward and forward of the right wrist, from a machinery accident, the hand having been twisted on the forearm by entanglement in a power-band. Reduction was readily accomplished, and, as in the previous case, the recovery was very rapid. On account of a severe laceration of one finger, the hand was kept on a splint for some weeks, but on careful examination of the wrist two weeks after the injury, none of the well-known symptoms of the so-called "Colles' fracture" could be detected.

Case III.—This case is open to some doubt. D. K., æt. 15, was playing with other boys, when he fell off a railed door-step, and "twisted his wrist all out of shape." One of his comrades grasped his hand, and "pulled it straight." He came into my office immediately, and I found only some tenderness about the joint: this subsided in a very few days, and left no soreness or lameness behind it.

JOHN B. ROBERTS,
Recorder.

REVIEWS AND BOOK NOTICES.

TRANSACTIONS OF THE AMERICAN DERMATOLOGICAL ASSOCIATION, with the President's Address, at the Fourth Annual Meeting, Newport, R.I., August 31 and September 1 and 2, 1880. Official Report of the Proceedings, by the Secretary, DR. ARTHUR VAN HARLINGEN. Philadelphia, 1881. Pamphlet, 8vo, pp. 85.

The specialty of dermatology is one which lies closer to the work of the general practitioner than that of other specialists. Ophthalmology, otology, etc., require in every case peculiar manual dexterity in one who would practise in these branches with success. But the dermatologist is simply a physician whose studies lie in certain directions, not a skilful operator or manipulator. Moreover, he is daily digging his own grave. Of few devotees of medical science can the old Virgilian lines be so appropriately quoted,—

"Sic vos non vobis mellificatis apes."

Out of the slough of confusion and ignorance in which diseases of the skin seemed buried a few years ago, there has already risen a fair fabric, built by skilful architects, and as appropriate for its purpose as in the present state of our knowledge any work of the medical builder may be. The student, supplied with the text-books of to-day, may begin the study of dermatology with confidence, knowing that he shall not be overwhelmed with the jargon of an obsolete and confused classification and driven to distraction by the multitudinous synonyms of a barbarous nomenclature.

Much of this work of simplification and elucidation has been done by the dermatologists of America, and in no country has the study of skin diseases been carried on with such enthusiasm and vigor as in our own during the past decade. The address of the president of the American Dermatological Association, Dr. Duhring, contained in this volume of the Transactions, bears abundant witness to the labors of himself and his associates, since it is occupied with a short *résumé* of the dermatological work of the past ten years. Not least among the writings there mentioned are those of the eminent president himself, whose Treatise, the second edition of which we recently had occasion to notice, has done more to simplify and make clear the subject of which it treats than any other work published in the English language, and whose Atlas, now approaching completion after years of preparation, is one of the most creditable works which the profession of this country has as yet produced.

Of the various other papers which are abstracted in the volume before us, we may mention that of Dr. Greenough, on herpes progenitalis, that on the treatment of eczema of the hands and face, by Dr. Bulkley, and that of Dr. Heitzmann, on some experiments in epilation, as of particular interest to the general medical reader. The discussions on these topics, having brought out expressions of opinion from the best-known dermatologists of the country, add much to the interest of the papers themselves. Other papers are those on Medicinal Eruptions, by Dr. Van Harlingen; on Ainhum, by Dr. Da Silva, Lima; on Tumors of the Skin, by Dr. Heitzmann; on Papilloma Cutis, by Dr. Hardaway; a Report of a Case of Scleroderma, by Dr. Graham; Pityriasis Maculata et Circinata, by Dr. Duhring; The Kerion Stage of Tinea Tonsurans, by Dr. Atkinson; Lichen Planus of the Penis, by Dr. Bulkley; Report of Two Cases of Fragilitas Crinium, by Dr. Walter G. Smith. The report of the Statistical Committee is an analysis of 11,047 cases of skin

disease which had come under the care of the members of the Association during the year previous. It contains much interesting material. Appended to this is the annual report on leprosy in the United States, in continuation of the reports of former years. We understand that these have been made use of by the Superintendent of the Census in preparing a report upon the prevalence of this malady.

We may add, for the benefit of those who desire to consult the papers of which abstracts are given in these Transactions, that they will be found in full in the *Archives of Dermatology* for October, 1880, and January and April, 1881.

COULSON ON THE DISEASES OF THE BLADDER AND PROSTATE GLAND. Sixth Edition. Revised by WALTER J. COULSON, F.R.C.S. 4to, pp. xxxii., 607. London, J. & A. Churchill, 1881.

Not many books reach a sixth edition, and when they do it is a fair evidence of a lusty youth and a vigorous age. The twenty-three years since the last edition have seen so many discoveries and improvements in medicine that it is no surprise for the editor to tell us that nearly all the chapters have been rewritten and several entirely new ones have been added. Among the last, in graceful contrast to the chary treatment accorded it by Sir Henry Thompson, is one on litholapaxy; and Dr. Bigelow is rightly credited with not merely an improvement on an old method, but a new method. Indeed, one feature of the book is the thoroughness of the editor's knowledge of American surgical literature. Scarcely a chapter is read which does not mention our familiar names. To our surprise, therefore, we found one so well known as McClellan misspelled by the omission of the "c." There are, however, far too few illustrations. Few books bear illustration so well as surgical text-books; those especially of narrow scope should be full, giving the various instruments to be used, the procedures, the regional anatomy involved, etc. Among its readers will be many a one who does not know even the simpler but it may be less-used instruments, and he goes to just such a text-book as this for information and fails of his purpose. So exhaustive a treatise as this pretends to be, with its thirty-two chapters and over six hundred pages, ought to have vastly more than twenty-two engravings.

The subject of calculus is very fully and excellently treated, and we commend especially the chapter on the Solvent Treatment of Calculus. *Per contra*, there is no chapter on the analysis of the urine, nor are even the scattered directions on the subject of great value.

To give, however, an idea of its contents, or even a brief discussion of scattered points, is impossible in our limited space. We can only, therefore, commend it as an excellent hand-book on its subject, thorough, modest, and as complete as any we know.

W. W. K.

GLEANINGS FROM EXCHANGES.

THE TREATMENT OF ANÆMIA.—Dr. Sidney Coupland, at the conclusion of his Gulstonian Lectures on Anæmia (*British Medical Journal*, vol. i. p. 633), speaks of hygienic measures including hydrotherapy, and endorses the conclusions of Drs. Mary Jacobi and White as to the increased tissue-change brought about by the use of the wet pack with massage in addition to ferruginous medication. As to diet, Dr. Coupland recommends meat in considerable quantity as soon as the digestive organs are capable of disposing of it; but when, as so often happens, the digestive power is at a minimum, then recourse may be had to meat essences, peptonized foods, and (as an extreme measure) nutrient enemata. The anæmia is sometimes partly caused by a non-nitrogenous diet, and patients are averse to it, but it is essential.

Of medicines, iron of course stands first. The action of iron has never been explained, nor why the best results in the most marked cases of chlorosis are obtained by the administration of heroic doses far in excess of what is actually required in blood-formation, and much more also than is actually absorbed. Dr. Coupland gives a table of cases of anæmia treated by iron and arsenic showing the increase in value of the corpuscles and also their increase in number. He prefers the sulphate in large doses, and says its rapid effect in chlorotic anæmia is surprising. It is usually well borne.

Next to iron, and in some forms of anæmia to be preferred to it, is arsenic. It is almost the only drug which has been successful in the treatment of severe idiopathic anæmia, which more often resists all medication. In one case cited, where the estimated number of blood-corpuscles per cubic millimetre was 560,000, or 11.2 per cent., four minims of Fowler's solution with digitalis were given six times daily. In two months' time the number of corpuscles had increased to 64 per cent. In this case iron had failed. Quinia, strychnia, and the mineral acids as usually employed are valuable adjuvants.

Transfusion in symptomatic anæmia, as from loss of blood, Dr. Coupland thinks is advantageous. It is another matter, however, in regard to transfusion in pernicious anæmia. Of twenty cases reported there were only six recoveries, all occurring in the practice of Quinke, the originator of the plan. Dr. Coupland thinks Quinke's success is due to the fact that he has resorted to the method earlier in the course of the disease. Quinke

thinks that in transfusion the blood is reinforced with functionally active elements; and the results of his cases apparently bear out that opinion. Transfusion, then, is a correct and rational procedure, and one which we are bound to adopt in these cases of progressive idiopathic-anæmia, if no ordinary treatment makes any impression on them.

VICARIOUS MENSTRUATION FROM A SEBACEOUS TUMOR OF THE AUDITORY MEATUS.—Dr. J. Orne Green (*American Journal of Otology*, 1881, p. 133) gives the case of a young lady who came under his notice in 1877, suffering from occasional bleeding from the right ear.

There was no pain, deafness, or noises; and examination showed both ears absolutely normal in every respect, with the exception of a very slight prominence just at the edge of the right meatus, probably due to a former furuncle. The bleeding was at first supposed to be nothing more than an excessive flow of discolored semi-fluid cerumen, and the patient was dismissed. She appeared again two years and a half subsequently, stating that the bleeding had rather increased in quantity, and Dr. Green was then informed that it occurred at the menstrual periods. At such times the patient often, but not always, suffered from severe headaches; and if the bleeding from the ear occurred during such headaches, it would relieve the head. The patient had formerly suffered from bleeding at the nose during the menstrual periods, but this had ceased since the ear-trouble had begun. The hemorrhage was quite profuse,—sufficient at a time to cover a handkerchief,—and might occur several times during one menstruation. There were no symptoms in the ear,—neither pain, noises, throbbing, nor deafness; and examination showed nothing abnormal except that at the seat of the former slight prominence there was now a distinct sebaceous tumor as large as a bean upon the lower edge of the meatus, which the patient said had been increasing in size for some months. The skin over this was extremely thin and adherent to the tumor, and its surface was dotted with minute red spots, the seat of the last hemorrhage a few days before. As the tumor appeared to be without doubt the source of the hemorrhage, it was removed by elliptical incisions embracing the base and then dissecting out the whole mass. The contents of the cyst was sebaceous secretion, and the growth was nourished by a single artery, of large size considering the size of the tumor, which entered at its base. Five months afterwards there had never been any return of the hemorrhage from either ear or nose, and the headaches at the menstrual period were about the same as ever,—certainly no worse.

Dr. Green mentions a similar case which came under his observation, where, during menstruation, there was hemorrhage from the mucous surface of the tympanic cavity, the drum-head having been destroyed by previous disease.

PARALYTIC CHOREA.—Dr. Gowers (*British Medical Journal*, vol. i., 1881, p. 636) says that in a well-marked case of common chorea three symptoms may commonly be noted,—spontaneous movement, incoördination of voluntary movement, and muscular weakness. Any one may predominate, and Dr. Gowers gives several cases where muscular weakness predominated the other elements; muscular spasm and incoördination were so slight as to be apparently absent. After giving notes of the cases (five in number), Dr. Gowers goes on to say that the age at which this form of chorea occurs is from seven to fifteen. Gradual loss of the use of one arm commonly first attracts attention, or, in some cases, the sudden dropping of objects, so characteristic of the imperfect muscular control of chorea, is noted early. In rare cases slight clonic spasm occurs in the affected arm at first, and passes off subsequently. The loss of power may be very great and real, or it may be much less than the loss of use of the limb would suggest. In these cases there is rather inaction than paralysis. The affection is usually confined to one arm; there is no hemiplegic weakness, no paralysis of face, tongue, and leg. Both arms may be affected, but one is always weaker than the other. Close and continued observation will usually detect an occasional slight choreic twitch, even in the arm which is weak, but more often conspicuous in the other arm which is the less weak, or even strong. Sometimes slight clonic contractions may be noted in the legs. The affection may pass off without choreiform movements being more conspicuous. Frequently, however, these subsequently come on; and they may be even more marked as the power in the arm becomes greater.

Whenever a child of seven to fifteen suffers from gradual loss of power in the arm, and presents no weakness in face, tongue, or leg, the disease, so far as Dr. Gowers has seen, is always chorea. If the nature of the case be suspected, confirmatory evidence,—slight occasional spasm,—if looked for, will commonly be at some time detected, either in the weak arm or in the other. The course of these cases is often tedious, and, as the choreoid movements may increase as the weakness passes off, the patients often seem to the friends to be getting worse when really getting better. Dr. Gowers has never seen this form pass on into severe general chorea.

The cases given were treated by strychnia and arsenic.

TREATMENT OF SOME FORMS OF EPILEPSY.—Dr. Ramskill, in a clinical lecture on this subject (*Lancet*, May 7, 1881), says he gives carbonate of ammonium with the bromide of potassium. It has long been known that the addition of this drug increases the effect of the bromide. It has also the advantage of

being an antacid and stimulant. It is of great use when the iodide and bromide are administered together, and, indeed, in every case where there is much depression. Bromide of lithium is supposed by some to be a more powerful salt than the bromide of potassium or that of sodium. Dr. Ramskill thinks well of giving the potassic salt for a period, and, when its action ceases to be protective, adding small doses of the lithium salt. In some cases of syphilitic epilepsy large doses of iodide of potassium are curative, but in a few others very large doses having succeeded to a certain point then suddenly fail. At this juncture more iodide of potassium will not succeed, but the addition of a few drops of tincture of iodine makes a combination which acts magically on specific disease.

As to the dose of the potassium salt, Dr. Ramskill finds that forty-five to sixty grains a day are enough for an adult. No more than just sufficient should be used. Voisin says that a therapeutic dose of bromide of potassium is not reached until reflex nausea is suppressed on introducing a spoon as far as the epiglottis: it is not until then that the bulb is certainly acted upon and its excitability diminished. Dr. Ramskill thinks that this statement is not universally true, and that the epileptic fits may be subdued without going so far as the suppression of reflex nausea, and *vice versâ*. Bromide has far more influence over the *grand mal* than over the *petit mal*. The more frequent and violent the fits, the more marked success is to be gained by treatment. Too much bromide should not be given, for, if bromism once ensues, the treatment must cease, and the patient suffers from the effect of the medicine, while the case relapses as to the occurrence of fits. The bowels should be kept open, and in young cases an ice-bag may sometimes be worn next the spine for two or three hours every day. A pill of valerianate of zinc, aloes, and conium is given at night in some cases; in others, camphor and chloral inunctions are used with success.

SYPHILIS AND TUBERCLE OF THE THROAT.—Mr. Lennox Browne (*British Medical Journal*, vol. i., 1881, p. 685) says the voice of syphilis is generally hoarse, but rarely aphonic, because there exists congestion or ulceration, with irregular thickening; whereas in phthisis complete loss of voice is a very early symptom, and is due partly to muscular enfeeblement and deficient lung-power, but mainly to mechanical impediment to approximation of the cords, caused by the swelling of the sub-mucous tissue covering the arytenoid cartilages. Respiration is rarely continuously affected in syphilis, except in the later stages, when there is stenosis of the glottis, though acute attacks of dyspnœa, due to œdema, are not uncommon. In either case, paroxysmal stridor is the form in which this symptom is most often present. In phthisis, breathlessness is a constant and early symptom. There is no pain in syphilis, even with considerable ulceration, except where there is perichondritis. In laryngeal phthisis there may be acute agony in the performance of every functional act. As to the physical or objective evidence in syphilis, the order of things is: congestion, ulceration, cicatricial narrowing, and deformity; in phthisis, anæmia, gray semi-solid thickening, and ulceration. Mr. Browne insists strongly on the characteristic appearance of the red, angry, pinched-out, deep, excavated ulcer of syphilis,—the epiglottis, for example, frequently looking as if a piece had been bitten out of it by some rodent animal, as a rat; whereas in phthisis the ulcers are pale and feeble, and begin as small, superficial, worm-eaten points, gradually commingling so as to resemble rather the nibbling of a mouse. Mr. Browne went on to urge that a decided diagnosis should be given in the early stages of laryngeal trouble, and that every means should be employed to make that diagnosis an exact one. He has often been able to confirm a doubtful diagnosis by means of the thermometer and weighing-scales, especially in cases of tubercle affecting the larynx, before the stethoscope revealed any signs of active disease in the lungs. The tuberculous character of the disease may often be recognized by means of the laryngoscope also, when stethoscopic examination gives purely negative results.

BELLADONNA-POISONING TREATED WITH PILOCARPIN.—Dr. Grattan (*British Medical Journal*, vol. i., 1881, p. 594) gives the case of a woman of 42, who drank by mistake two ounces and two drachms of belladonna liniment (B. P.). She discovered her mistake, and took two teaspoonfuls of mustard in water with no effect; walked a short distance, purchased an emetic, which she drank, returned home, and felt dizzy, her sight going and shadows before her eyes. She lost the power of speech, became greatly excited, had convulsions and vomited freely, and then lapsed into profound stupor. Seen by the doctor for the first time at 10.45 P.M., nearly six hours after the ingestion of the belladonna, the pupils were widely dilated, face swollen and bluish, pulse almost imperceptible, respiration twenty-five. A stomach-pump was introduced, and the stomach thoroughly washed out with mustard and water. Vomiting took place in half an hour, and sensibility began to return, but the patient soon relapsed into stupor, in spite of cold affusions, etc. At 3 A.M., ten hours after the ingestion of the belladonna, one-fifth of a grain of pilocarpin was injected subcutaneously, the dose being twice again repeated at intervals of fifteen minutes. After the third dose there was decided improvement; consciousness began to return, and the pulse became stronger. After the fourth dose the pupils began to contract

under the influence of light. From this time improvement was rapid. There was dizziness, with dilatation of the pupils, for two days. Half-drachm doses of tincture of opium were given every night until the third day, when she had entirely recovered. Four-fifths of a grain of pilocarpin in all were given. It appeared to act as a direct antidote to the belladonna. It did not cause the least perspiration.

SOURCE OF THE LIQUOR AMNII.—Wiener (*Edinburgh Medical Journal*, May, 1881; from *Archiv f. Gynäkologie*) injected coloring-matter under the skin of fœtal rabbits, and found that it was secreted from the kidneys in one case within twenty-five minutes, and in another case within a few hours. This shows that the fœtal kidney-secretion is not so slow a process as some observers would have it. He then argues that the fœtus must void its bladder, as when examined it is as often found to contain urine as to be empty. The author discusses and controverts *seriatim* Ahlfield's arguments against the possibility of the liquor amnii being the product of fœtal kidney-secretion. He gives a case where a pregnant woman died through accident, and where the fœtal bladder was found distended. The fœtal kidney has the same structure as that of the adult; and for this reason, as also because bile is known to be secreted during intra-uterine life, Dr. Wiener argues that urine is then secreted also. In answer to Ahlfield's objection that in cases where the kidneys were entirely absent the liquor amnii was still present, the author says that it is possible that other fœtal structures may perform the functions of the missing organ, just as in the adult the sweat-glands occasionally act for the kidneys to some extent when these latter are diseased. In addition, cases are known where deficiencies in the kidneys were accompanied by diminished liquor amnii. Wiener concludes that there is no doubt the kidneys secrete urine during intra-uterine life, and that this is voided at intervals from the bladder. In the earlier months the secretion from the skin and the mother's blood contribute, but the fœtal kidneys are the main source.

CONGENITAL CLOSURE OF THE POSTERIOR NARES.—At a recent meeting of the Obstetrical Society of Edinburgh (*Edinburgh Medical Journal*, May, 1881, p. 1035), Dr. Ronaldson gave the case of a female child born at full term, and apparently healthy, except for some peculiar obstruction to its breathing. On attempting to inspire, the lungs were not inflated, while the under lip and cheeks were sucked in. On slapping the buttocks to make the child cry, there was no difficulty to free respiration when the mouth was opened. On keeping the mouth open by a spoon and pulling the tongue a little forward, it breathed well and steadily and cried lustily. There was, therefore, no obstruction to the respiration through the mouth and larynx. On examination the nostrils were found filled with a glue-like translucent substance which could be pulled out *en masse* like a piece of tough glue. It was evidently a collection of inspissated mucus. After clearing the nose of this mucus an attempt was made to blow air through the nares, but failed. The passage of a probe was also attempted, but failed. The child died within twenty-four hours. Post-mortem examination showed that the posterior nares were completely occluded by a firm membrane. No other abnormality was found. The case, Dr. Ronaldson thinks, illustrates the fact that breathing through the nose is the natural method of performing that function, and that the infant has to learn to breathe through its mouth.

FOREIGN SUBSTANCES INTRODUCED INTO THE BRAIN WITH IMPUNITY.—At a recent meeting of the St. Louis Medical Society (*St. Louis Medical and Surgical Journal*, May, 1881, p. 566) a curious case was described of an insane convict who was in the habit of inserting wires, nails, etc., into his brain through an opening made in the skull by means of an awl. One of the wires was so long that it penetrated the brain-substance completely and struck against the skull on the other side. After the discharge of this convict from prison, he procured some morphia for the purpose of overcoming sleeplessness, and, taking an overdose, died.

A post-mortem examination was made by Dr. Carpenter, assisted by Dr. Sayer, of Leavenworth. In the substance of the brain the following foreign bodies were found: first, a wire four and three-fourths inches in length; second, a wire three and seven-eighths inches long; third, a wire six and three-fourths inches in length; a wire was removed from the middle lobe two and one-sixth inches long; one in the anterior lobe two and three-eighths inches long; a nail removed from the anterior lobe two and one-quarter inches in length; a needle removed from the middle lobe one and five-eighths inches in length. These were encysted in a manner in the substance of the brain, and apparently gave him no trouble whatever.

The patient had shown no psychical peculiarities during life which could be attributed to the presence of foreign bodies in the brain.

CASE OF REMARKABLY LOW TEMPERATURE.—Dr. Walter Mendelson (*New York Medical Record*, June 4, p. 627) gives the case of a man brought into the New York Hospital in a starving condition, extremely emaciated, weak, and almost voiceless. The surface was cool, the hands and feet being cold; the heart-sounds were almost inaudible, and the pulse beat forty-three in the minute; the temperature, taken several times and with two different thermometers, in the rectum, was 90.6° F. He was ordered stimulants by the stomach, with a hypodermic injection of equal parts of brandy and ether. Food was given

gradually, and the patient slowly recovered strength, the thermometer showing a progressive increase in temperature almost hourly until the normal was reached in about twenty hours. There was a tendency to fall, however, which persisted for some days, the thermometer showing 97.5° in the morning, but always rising to the normal in the afternoon. There was no febrile reaction, the highest temperature being 99.6° on the third day after admission. The digestion seemed in no way disturbed, for three days after admission the patient was eating heartily of everything, and was taking cod-liver oil and iron. He soon regained strength, but appeared to be in a state of mild dementia, which persisted during the two or three weeks of his stay in the hospital. His previous history in respect to mental condition could not be ascertained.

OVARIOTOMY AND PAROTITIS.—It is an established fact that orchitis and inflammation of the parotid may mutually complicate each other. Moreover, there has been observed a relation between inflammation of the salivary gland in question and that of the external genital organs and the ovaries. Facts in support of this opinion are found in the works of Bouteiller, Meynet, Peter, and Billroth. Schroeder, who had never met parotitis as a complication of operations on the female genital organs, has just seen it as a sequel of five ovariotomies, two of which proved fatal (*Il Morgagni*). He comes to the conclusion that parotitis is a grave complication of gynæcological operations.—*Medical Press and Circular.*

TREATMENT OF FREQUENTLY RECURRING "ERYSIPELAS" OF THE FACE.—Dr. James Braithwaite (*British Medical Journal*, vol. i., 1881, p. 681) says that for many years his father and himself have used with entire success a strong solution of tannin (four to eight grains to the drachm of alcohol and water). This application, which is not disagreeable to the patient, should be painted over the parts affected with a soft brush every two or three hours, and allowed to dry, the patient being careful to keep the face from the fire. If there is a tendency to frequently recurring "erysipelas," it is well to keep the tannin at hand, as it will always arrest a threatened attack.

UNUSUAL FORM OF DEATH IN TYPHOID FEVER.—At a recent meeting of the Dublin Pathological Society (*Brit. Med. Jour.*, vol. i., 1881, p. 647) Dr. Hayden showed the small intestines of a patient dying suddenly in the fifth week of typhoid fever. There was congestion of the Peyerian patches and glandular enlargement, but no ulceration. The thoracic viscera were, unfortunately, not examined, but Dr. Hayden thought the death due to pulmonary embolism. The patient, with no unfavorable symptoms but high temperature, was suddenly heard breathing stertorously, and found struggling for breath, and shortly died.

CALAMINE LOTION.—The following is the formula prescribed by the late Dr. Tilbury Fox:

℞ Levigated calamine, gr. xl;
Oxide of zinc, gr. xx;
Glycerin, ℥xx;
Rose-water to ℥j.

The main point is to get the white calamine, and not the red. It is a very soothing application, and is a great favorite with ladies who have flushed faces. It should be applied with a small, soft sponge, and allowed to dry on, the excess of powder being lightly dusted off with an old pocket-handkerchief.

MISCELLANY.

PRESERVING-FLUID FOR MEAT.—Wickersheimer has patented a new preservative fluid,—this time for keeping meat. Its composition is as follows: thirty-six grammes of potassa, fifteen grammes of chloride of sodium, and sixty grammes of alum are dissolved in three litres of water, the solution heated to 50° C. (122° F.), and afterwards nine grammes of salicylic acid added, together with forty-five grammes of methylic alcohol and two hundred and fifty grammes of glycerin. In smaller animals, one hundred grammes of the liquid are used for every kilogramme of weight of body; in larger animals, the amount may be reduced to forty grammes per kilogramme. The liquid is either injected before slaughtering, directly into the heart, or, after slaughtering, in the carotid. In the case of neat cattle and hogs, three grammes of saltpetre are added to the above liquid. The preserving power of the latter may be augmented by increasing the methylic alcohol to twenty grammes, salicylic acid to twelve grammes, and glycerin to four hundred and fifty grammes per litre of liquid. The meat may then be preserved two or three weeks entirely without odor.—*British Medical Journal*, vol. i., 1881, p. 680; from *Chem. Zeit.*

MEDICINE AND FICTION.—The *British Medical Journal* calls attention to a recent French novel of which a hospital interne is the hero. M. Jules Claretie's work is entitled *Les Amours d'un Interne.* The hero is deeply attached to a young lady who has become a ward-maid in *La Salpêtrière* in order to wait upon her mother, obliged through poverty to become an inmate of that institution for the relief of hystero-epilepsy. The heroine, in love with another gentleman, unwittingly asks her lover the interne whether she may marry without danger of transmitting insanity, and thus the plot is evolved. Various scenes of a most exciting character are depicted, with the aid of Charcot's writings, etc.

A NEW PAIR OF SIAMESE TWINS.—The *Wiener Med. Presse* contains an account of the brothers Tocci, born near Turin in 1877.

These creatures have two heads, two pairs of arms, and a double thorax with independent thoracic organs. From the sixth rib down, however, they have one body in common,—a single abdomen, a single umbilicus, one anus, one right leg, and one left leg. The genital organs comprise a penis and scrotum, but the rudiments of a second masculine genital organ can be discovered posteriorly, which occasionally permits a small portion of urine to escape. Viewed from behind, there are two separate vertebral columns, two sacrums, and three buttocks, of which the middle one is merely the result of union of the other two and contains a rudimentary anus. One anus serves both infants. The right leg is under the control of one twin, and the left, which is clubbed, of the other. Though well and strong, they cannot walk on this account. The personality of each infant is distinct; one cries or sleeps while the other may laugh or be awake. They are gay and lively with each other and with strangers. The heads usually lean one to the left, the other to the right, but one at a time may place the head in a perpendicular position, provided the other leans over a little more horizontally.

The *Réveil Médical*, from which we take this account, gives a picture.

A NEW TEST OF INTELLIGENCE.—The Parisian scientist Dr. Delaunay has made the curious discovery that to ascertain the qualities of a cook it is sufficient to give her a plate to clean, or sauce to make, and watch how she moves her hand in either act. If she move it from left to right, or in the direction of the hands of a watch, you may trust her; if the other way, she is certain to be stupid and incapable. Similarly, the intelligence of people may be gauged by asking them to make a circle on paper with a pencil, and noting in which direction the hand is moved. The good students in a mathematical class draw circles from left to right. The inferiority of the softer sex (as well as of male dunces) is shown by their drawing from right to left; asylum patients and children do the same. In a word, *centrifugal* movements are a characteristic of intelligence and higher development; *centripetal* are a mark of incomplete evolution. A person, as his faculties are developed, may come to draw circles the opposite way to what he did in youth. Dr. Delaunay has some further extraordinary conclusions as to the relative positions of races in the scale of development from the way they wind their watches and make their screws.—*Journal of Chemistry.*

THE PLAGUE.—This scourge has been ravaging the banks of the Lower Euphrates and the villages of Mesopotamia. Quarantine against it has been declared by the Egyptian authorities. In spite of this it is said already to have crossed the Mediterranean, and one or more deaths from it have been reported at Seville, Spain. The littoral cities of Southern Europe are by no means in such superior sanitary condition that all danger is averted of another experience such as Marseilles had in 1722.

THE NEW FRENCH SCIENTIFIC JOURNAL.—The Minister of Public Instruction has determined to publish a new scientific journal, under the title of *Revue des Sciences.* It is to be printed at the National Printing-Office, and sold as cheaply as possible. A number, containing about one hundred pages, will appear every month. Professor Milne-Edwards is to be the editor of the review, the object of which will be to give an analysis of all the scientific work done in France during the current year.

Qu. Quid est creare? (*What is creating?*)

Ans. E nihilo facere. (*To make out of nothing.*)

Rej. Bene; te doctorem nunc creavimus. (*Very well; we now create you a doctor.*)—*Exchange.*

PERFUMED CARBOLIC ACID is a solution of the acid in alcohol, with oil of lemon added. The proportion is: carbolic acid, 1; oil of lemon, 3; alcohol, 100.

NOTES AND QUERIES.

REMOVAL.

The personal address of Dr. H. C. Wood, Editor, will hereafter be 1925 Chestnut Street, instead of 1631 Arch Street.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM JUNE 12 TO JUNE 25, 1881.

HARTSUFF, A., MAJOR AND SURGEON.—To proceed to the Cantonment on the Uncompahgre, Col., and report for duty to Col. R. S. Mackenzie, Fourth Cavalry, commanding. S. O. 113, Department of the Missouri, June 8, 1881.

MIDDLETON, J. V. D., MAJOR AND SURGEON.—Having reported in person, is assigned to duty at Fort Hays, Kans., relieving Assistant-Surgeon Munn. S. O. 122, Department of the Missouri, June 21, 1881.

GARDNER, W. H., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for four months on surgeon's certificate of disability. S. O. 138, A. G. O., June 18, 1881.

MUNN, C. E., CAPTAIN AND ASSISTANT-SURGEON.—When relieved by Surgeon Middleton, to proceed to Fort Bayard, N.M., and report to the Commanding Officer for duty. S. O. 122, c. s., Department of the Missouri.

DE WITT, C., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for four months. S. O. 137, A. G. O., June 17, 1881.

TORNEY, G. H., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month, with permission to apply for an extension of one month, to take effect when relieved by Assistant-Surgeon A. W. Taylor. S. O. 122, Department of the Missouri, June 21, 1881.

TAYLOR, A. W., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—To proceed from Fort Supply, Ind. Ter., to Fort Lyon, Col., and report to the Commanding Officer for temporary duty. S. O. 122, c. s., Department of the Missouri.